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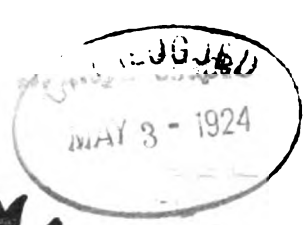
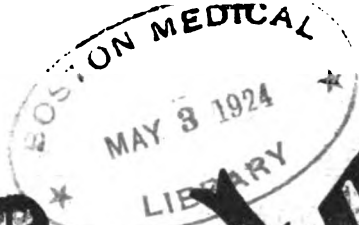
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Food & Sanitation

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Food and Sanitation.

SATURDAY, JANUARY 2ND, 1897.

"DR. FERDINAND" AND W. T. STEAD: A CONTRAST

"TWELVE months' hard labour is certainly not too severe a punishment for a man who has lived for years upon the proceeds of deliberate fraud practised systematically upon the persons and the pockets of the sick poor," says the *Daily Graphic*. "Henry Woodland, alias 'Dr. Ferdinand,' was a self-styled cancer-curer, a description which necessarily involves gross imposture. Cancer, as every educated person is aware, is a disease for which science has yet discovered no cure, and the man who professes to cure it is practising a peculiarly cruel deception on those who are stricken with this

terrible disease by encouraging them to put off until too late the surgical measures in which lies the only hope of arresting its ravages. To delude poor folk into paying—and, doubtless, paying heavily—for treatment which would still be useless even if it were inspired by the profoundest medical science is as base a method of earning a livelihood as any among all the shameful shifts to which unscrupulous men resort."

We quite agree with our contemporary, and therefore ask how it is that the fraud floated by Mr. W. T. Stead, "Mattei's Cancer Cure," which is merely dirty water sold at 3s. 9d. for two or three ounces, under the name of white, red, and green electricities as a cure of cancer still runs its swindling course unchecked by the law? There is apparently one law for this comparatively obscure charlatan "Dr. Ferdinand" and another for W. T. Stead, who launched on the public an equally heartless swindle on a far bigger scale, and it is a little in Ferdinand's favour that he did not cloak his knavery with hypocritical professions of religion, purity and regard for the public weal.

A MILK STANDARD.

MR. J. P. SHELDON, in "Vinton's Agricultural Almanac" for 1897, expresses the opinion that "it would be difficult for Parliament to fix a standard for milk, or even to make an effort to do so. The milk question, so far as a standard of quality is concerned, is one of hopeless complexity, and no doubt need be held that the committee felt themselves to be surrounded by doubt and difficulty. They are well aware that the composition of milk varies from a variety of causes, and the evidence they received went to show that, so far as quality goes, it is stable only in its instability. They seek, indeed, to transfer the responsibility to a 'specially-constituted scientific body familiar with questions of analysis and the chemistry of food,' the establishment of which they recommend; and who shall say they are not wise in their day and generation? But it may be almost equally doubted if such a body of scientific men would care to recommend any definite standard for milk, and it is certain that no standard can be fixed that would be fair alike to all milk-sellers or all producers of milk. Milk, in fact, varies in quality in different seasons of the year, in different months, in different weeks and days, and not uncommonly in the same day. It varies on account of changes in the weather and of the food the cows eat. It varies in different breeds of cows, and almost equally so in cows of the same breed, and it varies in the same cow on different occasions and in different periods of lactation; and, lastly, it varies as between morning and evening milkings, and even as between the first and last milk taken from the udder at any given milking. Modern research has again and again demonstrated all these different phases of variability in the milk of cows, and who, in the light of this accumulated information, shall have the temerity to fix a rigid standard?"

Mr. Sheldon's capacity to judge the subject may be gathered from the remarks we have italicised:—

"A basis on which numerous—nay, innumerable—prosecutions have been sustained, namely *2½ per cent. of fat, and 8½ per cent. of solids not fat, was adopted some time ago by, I understood, the Society of Analysts. But while this standard is obviously too low in reference to rich milk, it is too high for poor milk, which is, nevertheless, pure as it comes from the cow*" (we can only say it is a pity such pitifully

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inaccurate statements should find their way into print as a serious contribution to the milk question). "Whichever way we turn we are confronted with difficulty that involves unfairness to somebody, either to the producer or to the consumer, or else to the dealer in milk. To the consumer it is a disadvantage to buy inferior milk, even though it be pure; to the producer it is a serious loss, if his milk is two or three degrees above the standard adopted, and he receives only an ordinary, average market price for it; and to the dealer it is unjust if he be mulcted in a fine for selling milk, which, at all events, he has not tampered with. The committee are justified in assuming that a fixed standard would cause many farmers whose cows yield rich milk to tone the fluid down, in self-interest, until it should be only just above the standard required in the courts; and such a standard, unless it was a high one—which, indeed, would be impracticable in work—would be fatal to the movement now in progress in some places of breeding cows whose milk, as an hereditary thing, is of superior quality. It is obviously a desirable thing that all milk should be of good quality, and the consuming public are entitled to all the protection the law can afford to them against inferior milk, be it adulterated or no, either before or after it is taken from the cow; but it does not appear after all the painstaking investigation that has taken place, that the fixing of any standard will meet with plenary success. On the other hand, it seems more than ever likely, now, that a fixed standard would cut both ways.

"What, therefore, is the next step to take? How can we solve the problem? How untie the Gordian knot? It is to be presumed that the problem cannot be solved or the knot untied by establishing a fixed standard for so variable a fluid as milk; else how happens it that no agreement has been arrived at, in all these years of scientific definition, as to what the standard ought to be, and why are opinions now so hopelessly divergent? It is obvious that the present state of things is unsatisfactory, and we may conclude that it cannot much longer be tolerated. What then is the course to take in order to find the minimum of friction? Without any pretence or assumption of finality of invention, it seems now that the system of payment on a basis of results, which has met with so much success in Australia, affords the most promising means of cutting the knot, which has hitherto defied the ingenuity of our experts, as well as everybody else, to untie. For all practical purposes in the milk trade, a determination of the percentage of butter fat in the milk is a sufficient criterion of quality, because nobody tries to extract the solids not fat; and the feasibility of paying for milk at so many farthings per unit of butter fat ought not to be difficult to discover. In any case, milk is commonly a most erratic and variable fluid so far as the percentage of its solids are concerned,

and it does not appear to be in accordance with the eternal fitness of things that a rigid standard should be applied to so unstable an article."

MUSTARD ADULTERATION.

Two prosecutions at Manchester recently for mustard adulteration bring again into prominence the question of how mustard is adulterated. A Mr. Gradwell, of Ardwick, was one defendant charged with selling adulterated mustard.—Inspector Houlston visited the defendant's shop, and was served with " $\frac{1}{2}$ lb. of mustard" by an assistant named Rowley, to whom he paid 8d.—Mr. Estcourt, the Manchester public analyst, said the sample in question contained 15 per cent. of wheaten starch.—The Magistrates' Clerk: Is mustard not always a mixture, but sold as "pure"?—Mr. Estcourt: Such firms as Colman's, and Keen and Co. make both pure mustard and mixtures, but when it is a mixture it is described as such.—Mr. Rook: And sold as such?—Mr. Estcourt: Yes. Manufacturers mark their mixtures, as being mixtures, on the tins.—The Magistrates' Clerk: That is necessary, of course?—Mr. Estcourt: Yes; it is not called adulterated if it is declared, and sold as such.—The defendant said he had only been in the shop about three weeks, and he purchased the mustard as "mixed," but, inadvertently, he had not acquainted his assistant with this fact. He could assure the Bench that there was no intention to defraud. He had only sold $1\frac{1}{2}$ lbs. of mustard since he had been in the shop.—The Chairman of the Bench said they agreed that a technical offence had been committed, which was perhaps due to the fact that the defendant had not been long in the business.—A fine of 5s. and costs was imposed.

JOHN RYDER, 124, Lower Moss-lane, was next summoned.—Inspector Holland asked for half-a-pound of mustard, and there was nothing at all to indicate that the mustard was anything but pure.—Mr. Estcourt said that the sample in question contained 15 per cent. of wheaten starch.—The defendant said the mustard had been obtained from a warehouse in Manchester, and he did not know but what it was pure.—The Magistrates' Clerk: Is it invoiced to you as pure mustard?—The defendant: It was invoiced to the manager before me as mustard.—Mr. Rook remarked that the defendant was the manager of Searle's Stores, Limited, and was responsible for what had been sold. Whether the mustard was labelled by the manufacturers or not when it left the warehouse, it was sold out at the shop in the bulk. Had the defendant had it labelled properly he would have absolved himself from all responsibility.—The Magistrates' Clerk: If he has got it from a wholesale dealer as pure, he has his remedy.—A fine of 5s. and costs was imposed.

MARGARINE.

At Glasgow, on December 24, before Sheriff Mitchell, John Knotts, 90, Govan-street, was charged with having, on November 28, exposed margarine for sale, without the prescribed label, and also sold half-a-pound of margarine to Inspector Kerr, without delivering it in the proper wrapper. He pleaded not guilty. The defence, which was conducted by Mr. Robert M'Dowall, writer, was that the accused was not the occupant of the shop. It appeared from the evidence that John Knotts has a butcher's shop at 86, Govan-street, that he resides at 92, Govan-street, and that the license to carry on the shop at 90, Govan-street as a dairy was applied for in the name of accused, although there was no name above the door, and the receipts for taxes are in the name of Mrs. Knotts, who, her husband said, got all the drawings. Inspector Kerr stated that he asked for half-a-pound of butter at 1s. Mrs. Knotts said it was not butter, but margarine. He purchased

the margarine, and it was delivered in plain paper; but afterwards Mrs. Knotts produced an unopened parcel of proper wrappers. The Sheriff found the respondent guilty, and imposed a fine of £1, with £1 18s. expenses.

At Leigh, on December 28, four grocers were prosecuted by the Royal Agricultural Society and the Lancashire County Council. Bernard Malone was fined 20s. and costs for selling butter containing 75 per cent. of substances other than butter. William Collier, £5 and costs; Catherine Gregson, 5s. and costs; and Michael Burke, 40s. and costs, for exposing margarine for sale without a proper label.

JOHN HUGHES, 16, Fordham-street, Mile End, was summoned on December 15, at Thames, under the Margarine Act, at the instance of James Twaites, inspector of food and drugs to the Mile End Vestry, for exposing margarine for sale without a proper label. The defendant had three tubs of margarine exposed for sale without being labelled. He said that his wife, who attended to the shop, had been ill, and the shop had been neglected. He had the proper labels and wrappers in the place, and it was an oversight that they were not used.—Mr. Mead inflicted a fine of £3.

MILK.

At Lancaster, on December 17, John Cottam, farmer, Well House, Scotforth, was summoned under the provisions of the Food and Drugs Act for selling adulterated milk on November 4. Mr. Tilly defended.—P.S. Smith proved taking the sample from defendant's son on November 4. It was divided into three parts and handed to the Chief Constable, one being given to the seller of the milk. On November 10 he went to defendant's farm and took another sample from the cows.—Cross-examined: The second sample was from two cows, and they were being fed on provender at the time.—The Chief Constable proved handing the samples to Mr. Estcourt, Borough Analyst, and produced his certificate.—The Magistrates' clerk read the certificate, which stated that the analyst was of opinion that the sample contained 8 per cent. of non-fatty solids, 2.6 per cent. of fatty solids, 16 per cent. of added water to the extent of 24 per cent. when compared with milk taken from the same farmer's cows on November 10.—Mr. Tilly objected to the analyst's certificate. The case had to be tried on the analyst's certificate, and that certificate should contain all the ingredients which went to make up the hundred parts of the sample, and if it did not the defendant was entitled to an acquittal. In that instance Mr. Cottam was so satisfied with the milk that when the sample was taken he took very little notice. He had been bringing milk into the town for 36 years, and for 20 years had done so under the provisions of the Act. His milk had often been sampled, and he had not the slightest suspicion of it, or would have had the sample he got analysed. He objected that the certificate was insufficient. It was the Bench that had to decide the case, not the analyst. Mr. Tilly quoted decisions given in 1893 and the present year, in which the judges held that under the Act an analyst must state all the ingredients found in the sample submitted to him for analysis. It was not sufficient to say that he was of opinion so and so, but must give all the facts. What the analyst did in that case was to compare the sample with something taken from Mr. Cottam's cows at later date, and there was no evidence to show that those cows were in defendant's possession on the original date. In addition to that, on November 4, the cows were going out, whilst on the 10th they were being fed inside. The analysis was not the slightest use in that case.—The Bench retired, and on coming back into Court, the Chairman announced that they dismissed the case on the ground that the certificate was incomplete.

At Grimsby, on December 24, John Hutson, farmer, of Holton-le-Clay, was charged with selling adulterated milk, on the 7th inst.—Mr. H. F. Moody, sanitary inspector, said he took a sample of milk from the defendant's son, and the certificate of the analyst showed it to contain 2.80 per cent. of added water. Defendant expressed his ignorance of the affair, but as this was his third offence, he was fined £5 and 11s. costs.

At Helston, on December 19, Alfred Freeman, farmer, Degibna, Wendron, was charged with selling adulterated milk in the borough, on December 2. Superintendent Beare bought of defendant a pint and half of new milk, when he was delivering milk at the workhouse, for which he paid 2½d. The county analyst, Mr. Kitto, had certified that the sample sent contained 8 per cent. added water. The Bench considered it a very serious case. Freeman had tendered a low price, 8½d. per gallon, for new milk, to secure the contract and impose upon a public institution by adulteration to the extent of 8 per cent. added water. The sufferers were the children and poor inmates of the workhouse. They were strongly disposed to adjourn the case to compel defendant to appear. Eventually it was decided to impose a fine of £1 with 18s. 6d. costs.

At Swansea, on December 24, Luizi Carozzi, of Alexandra Buildings, and Mary E. Grey, of the Bridge, were summoned for selling adulterated milk. Grey said she sold the milk exactly as she received it, but the Bench imposed a fine of 40s. Carozzi did not attend, and a warrant was issued to compel him to do so.

At Dublin, on December 18, Mary Donnelly, of 21, Merchant's Quay, was summoned at the instance of Inspector Hickey for having sold milk adulterated by the addition of 25 per cent. of its weight of water. Inspector Hickey proved purchasing the milk, and Sir Charles Cameron gave evidence as to the adulteration. The defendant stated that she had an agreement for the supply of the milk, and that she never put any water in it. Mr. Swifte fined the defendant £2.—Patrick O'Connor, 20, Little Denmark-street, was summoned by Inspector Hickey for having sold new milk to which was added 8.9 per cent. of its weight of water as an adulterant, making thereby a mixture of 100 parts of milk and 8.9 parts of water. A fine of £2 was imposed.

At Walsall, on December 23, Alfred Huxley, restaurant proprietor, Bradford-street, Walsall, was charged with having sold milk containing 12 per cent. of added water.—Mr. J. R. Cooper (Town Clerk) prosecuted, and Mr. H. H. Jackson defended.—Inspector Harries stated that on December 1 he was supplied with some milk from the defendant's shop. He divided it in the usual manner, and sent a portion of it to Mr. Jones, the borough analyst, who certified that it contained 12 per cent. of added water.—Mr. Jackson said he could not attempt to contradict the certificate, but he should rely on the section of the Act which stated that if defendant could show that he received the milk under a warranty, and sold it precisely as he received it, he was entitled to be discharged. In this case defendant received the milk from Mr. Laban, and he would prove that the milk never went out of the hands of the assistant who took it in until handed to the inspector. Defendant was a printer in the town, and his wife kept the shop, so it was very unlikely that he would have been guilty of the offence. He made no business of selling milk, and the utmost he disposed of in a day was one quart, so that, at the rate of adulteration certified, he would have had to sell nine gallons to gain 1s.—Bertha Payne, assistant to Mrs. Huxley, spoke to receiving the milk from Mr. Laban about 9.30, and Mr. Harries called about an hour later. During that time the milk never left her sight, and no water was added to it.—Mr. Laban said he sold about fifty-one gallons of milk per day. He had supplied

defendant with milk for thirteen months. At the outset he gave him a warranty of purity of the milk, a copy of which he produced.—The Town Clerk said the original ought to be produced, but the Magistrates' Clerk held that although it was not a legal document it might be taken for what it was worth.—Laban, continuing his evidence, said he received the milk in bulk from Mr. Morton, of Old Longden Farm, Rugeley, and with each day's supply he received a warranty, certifying that it was new milk with all its cream on. The milk was delivered to defendant by him as it was received from Morton.—In answer to the Town Clerk witness said he knew that the same morning the Inspector took samples from his cans at the station, but he did not know they had been returned as genuine.—The Magistrates' Clerk wished to know where the water came from?—Miss Payne was re-examined, and repeated that the milk was never out of her sight, and nothing could have been put into it without her knowledge.—The Clerk, after some deliberation with the magistrates, said their worships were of opinion that the adulteration took place before the milk came into defendant's possession, and although the warranty was not enough to take the case out of the Act, he asked if Mr. Cooper would be willing to let the case be withdrawn on payment of costs.—Mr. Cooper assented to this course being adopted, and the case was therefore withdrawn on payment of costs.

WALTER STIMPSON, farmer, Denaby, was summoned at Doncaster, on December 19, for selling adulterated old milk at Mexbro'.—Inspector Wilson, in the service of the County Council, said the analysis showed 23 per cent. of added water. The milk was being sold at a penny per pint and three halfpence per quart.—The defendant, who had nothing to say in answer to the charge, was fined £2 including costs, the chairman (Mr. G. B. C. Yarborough) intimating that the full penalty was £20, and that doubtless the inspector would again visit the defendant ere long.

At Wigan, on December 18, Thos. Wills, farmer, Park-lane, Abram, was charged with selling milk adulterated with 8 per cent. of added water on November 21.—The prosecution was taken by Mr. Jas. Wilson, on behalf of the police.—Police-constable Young and Sergeant Scott proved the offence, and defendant, who was represented by his wife, was fined 20s. and costs.

At Watford, on December 22, James Kerry, fruiterer, of Watford, was charged with selling a pint of new milk, which was found to contain 7 per cent. of water by Mr. A. E. Ekins, St. Albans, the analyst.—Defendant pleaded not guilty.—William Grosswell Rushworth stated that on the 3rd ult. he went into defendant's shop and asked to be served with a pint of new milk. Witness was served, and he then informed defendant why he had purchased it. The sample was analysed, and was found to contain 7 per cent. of added water.—A fine of £1 and £1 4s. 6d. costs was imposed.

At Torquay, on December 22, Eliza Grist, Babbacombe, was summoned for selling diluted milk, on December 2.—Mr. I. Carter, who appeared for the defendant, said the milk in question was sold by defendant's son. He recognised that Mrs. Grist was responsible, as she had no written warranty from the farmer from whom she bought it, and, therefore, inasmuch as the public analyst had stated that it was adulterated to a certain extent, and he was not prepared to resist his certificate, he (Mr. Carter) saw no alternative but to admit the offence. By way of mitigation, however, he wished to say that Mrs. Grist sold the milk in the same state as she had it from Mr. Mudge, farmer, of Dacombe. There was no remedy against the farmer, unless there was a warranty, but, under the circumstances, he asked the Bench to impose a small penalty.—Detective Pratt stated that on the day in question he saw Frank Grist, who delivers milk for the defendant, leave the shop. Witness asked him for half a pint of new milk, for which he tendered a penny. He subsequently told the young man that it was purchased for the purpose of being analysed. He handed samples to Supt. Roberts, who forwarded one to the police analyst.—Supt. Roberts said the county analyst's certificate stated that the milk was adulterated with 23·6 per cent. of added water.—Mr. Carter called Frank Grist, son of the defendant, who stated that the milk was brought in from Mr. Mudge's farm at Dacombe by a man named Jackson. Five minutes after its delivery he took it out on his round.—The Bench said defendant was responsible to the public, and she would be fined £1 10s. inclusive.

At Cork, on December 19, Denis Collins, shop-keeper, 120, Barrack-street, and Daniel Walsh, farmer, were summoned at the suit of the Corporation for selling adulterated milk.—Mr. B. C. Galvin, solicitor, who prosecuted, said that Denis Collins was a retailer in the city, and Daniel Walsh was a farmer that supplied him. Both defendants had been previously before the court. On the last occasion a sample of milk was taken from Collins for analysis and found to be adulterated. A sample was then taken from Walsh, and it was also found to be adulterated. When the case came before the court, the magistrates fined Walsh a sum of £1 and dismissed the case against Collins, as they believed he was not responsible for the alteration in the quality of the milk. Since then, two samples had been taken, and as a result they found the milk in Collins' case, which was taken on November 19, was deficient in fat to the extent of 13 per cent., and the milk taken from Walsh, on November 18, was deficient in fat to the extent of 11 per cent. Walsh was fined £1 on the last day, and he paid neither fine nor costs, and had not the courtesy to answer the summonses that day. He (Mr. Galvin) asked, if they framed the case that day to put such a penalty on this man as would prevent him from continuing this course of conduct.—Sergeant Ralph, local inspector under the Food and Drugs Act, proved the purchase

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of the milk.—Mr. Galvin produced the analyst's certificate.—The Bench fined Walsh £2 and £1 costs, and Collins, who said he had given up selling milk, was fined 5s. and 5s. costs.

SPIRITS.

AT Dukinfield, on December 24, the County Council Inspector under the Food and Drugs Act, Mr. Samuel Lea, summoned Reece Ivill, Globe Hotel, Dukinfield Hall, for selling whisky which was adulterated. Mr. J. A. Garforth appeared for the defendant, and pleaded not guilty at present.—Inspector Lea said he visited the defendant's house on November 19, and purchased a pint of whisky from the defendant's wife, for which he was charged and paid 2s. He told her he was an inspector, and it was his intention to submit a sample to the public analyst for analysis. He did so on the 21st, and had received the certificate produced, which stated that the sample submitted to him contained 71 parts of proof spirit, and 29 parts water, or contained four per cent. more water than was allowed by Act of Parliament. The amount of adulteration, added Mr. Lea, was not very large, but, on the other hand, the law allowed a liberal amount of advantage, 25 per cent.—Mr. Garforth: Was this Irish or Scotch whisky?—Mr. Lea: I don't know.—Does not the analyst know? I don't know.—What did you ask for? A pint of whisky.—Whisky, only, without saying which sort? Yes.—Did you only take one sample? Yes.—You did not try three or four different spirits? No.—Have you ever taken a sample before from this house? No.—Would it surprise you to learn that a sample was taken at this house five years ago, and returned, finding it to be to his credit? I should not expect any inspector to do such a thing.—How long has the defendant kept the house? I don't know; a long time, I believe.—Do you know what age he is? I don't know him.—Would you be surprised to know that he is 72 years of age? No; he might be 172 for anything I know.—Supposing you got hold of a sample of whisky which was seven within proof, would you have reported it? No.—You would not have made an allowance for averages? No, none whatever.—Mr. Garforth, for the defence, said Mr. Ivill had been in business for 22½ years, during which period he had not had a complaint against him of any sort. For the last 18½ years he had kept this particular house, the Globe Inn. He was 72 years of age, and it was only 4 per cent. in an ordinary mixing, and his age might have contributed to the error. He thought the inspector might have overlooked that on this particular occasion. They were allowed a margin of 25 per cent., but he (Mr. Garforth) could not mix whisky 25 per cent., and he thought a gentleman of 72 was liable to error. The facts of the case for the defendant were that some little time ago the customers in the house were telling the defendant that his Scotch whisky was rather strong. They therefore tested it, and it was found to be 18 instead of 25, and Mr. Ivill proceeded to mix up the Scotch whisky with sufficient water to bring it up to the proper standard. He must have made an error by adding that quantity of water to the Irish instead of the Scotch whisky. Under the circumstances, if the Bench could not see their way to dismiss the case entirely, and if they believed it was an inadvertence, they would visit the defendant very lightly. In saying this he withdrew his plea of not guilty. He had had the whisky tested, and it was of the strength stated by the inspector.—The Bench fined defendant 10s. and costs.

AT Newport County Police-court, on December 19, the Monmouthshire County Council, through their inspector under the Food and Drugs Act, proceeded against three publicans in the Risca district for selling whisky unduly diluted with water. The defendants were William Morgan, Risca House Inn, Risca; John Haines, of the Tredegar Arms, Risca; and Ephraim

Gleverly, of the Plough Inn, Risca. Mr. Stafford Custard, clerk to the County Council, appeared for the prosecution, and Mr. Lyndon Moore defended. Mr. T. Sergeant, the inspector, proved the purchase of the half-pint of whisky at the defendants' houses on the 13th November, and Mr. G. R. Thompson, the analyst to the county, proved his analysis. The law allows the liberal allowance of 25 per cent., or one-fourth; below that, the anathema comes in. Mr. Lyndon Moore suggested that a very small proportion below the limit might be due to evaporation, and that a matter of two degrees was not one which should cause action to be initiated. In Mr. Morgan's case the amount was 1½, or 25·57 under proof. Mr. Moore produced one of Sykes's hydrometers, a clever little instrument, which he said every careful publican possessed himself of in order to keep beyond the meshes of the law. He also asked that the analysis might go to Somerset House. Mr. Gustard did not dissent to allow the case to go to Somerset House, but pointed out that the hydrometer test was speedy, though less accurate than that by distillation, the process adopted by the analyst. The Bench decided, as the dilution was slight, to dismiss the case on payment of costs.—Mr. Moore: Will you grant me, if necessary, a case for appeal. This man will not with all respect submit to the order.—Mr. E. Lewis: That is the unanimous decision of the Bench.—The Magistrates' Clerk (to defendant): The costs are 4s. 6d.—Mr. Moore (to defendant): Don't you pay.—Mr. Gustard: I suppose there is a default?—The Magistrates' Clerk: We will summon him afterwards.—In Mr. Haines's case the dilution was shown to be 47·6, or 22·6 below the minimum, and Mr. Moore explained that this arose from the defendant's wife taking a decanter containing sherry to eke out the half-pint ordered, as the small earthenware barrel ran dry.—Mr. Gustard (to defendant's wife): Would you be surprised to hear that Mr. Thompson finds no trace of sherry in it?—Mrs. Haines: Well, I did mix it; I could not stoop very well.—Mr. Moore submitted that there was no moral transgression. The Bench called Mr. Thompson, who said there was no trace of the volatile acids of sherry present, and that in making an analysis it would be impossible to overlook the presence of such acids. The Bench regarded the case as a serious one, and imposed a fine of £5, including costs; license not to be endorsed.—In the case of Mr. Cleverly, of the Plough, the dilution was 33·86 below the minimum, or 8·86 deg. to the undoubted prejudice of the purchaser. Mr. Moore produced a usual notice as to dilution, which was affixed in the bar; but Mr. Sergeant said he did not see it, although he always looked for one. Mr. Moore admitted that under a recent case from Glamorganshire—*Jones v. Thomas*—tried before Justices Wills and Wright, such notice was no longer a protection; but that the defendant had kept such a notice in his bar for 16 years, since he kept the house in fact, and honestly believed he was so protected. The Judges' decision was that the notice as to dilution must be affixed to the bottle handed to the customer. The Bench decided to fine Mr. Cleverly 40s. including costs, and wished it to be known that the notice did not exonerate publicans. If it did, there would be no need to possess hydrometers.

OWEN LYNCH, grocer, and Patrick Lynch, his son, 114, Middle Abbey-street, Dublin, were summoned, on December 18, by Food-Inspector Lyons, for having refused to give him a sample of whisky which he asked and tendered payment for with a view to analysis. Mr. Ignatius Rice, Assistant Law Agent to the Corporation, prosecuted, and Mr. J. J. Walsh defended. The inspector deposed that the younger Lynch had the whisky ready and parcelled for him, but when he told him what he wanted it for he refused to give him the whisky, and handed it to the owner of the establishment. The latter also refused it to him, stating that it was Power's, but

offered to give him Jameson's. Witness took the bottle off the counter, but Lynch pulled it from him.—To Mr. Walsh: Mr. Lynch had told him that there was a cork in the bottle, but did not tell him it was dirty and wanted to be washed. He offered to take any other bottle of the same kind, but that was refused.—The two Lynchs were examined for the defence. Their evidence was to the effect that the bottle being dirty and having a cork in it, they filled as much of the whisky as was clean into a fresh bottle, and filled the balance from a jar containing the same class of whisky, but the inspector would not accept it. They denied that the bottle had been snatched from the inspector.—Mr. Wall dismissed the case against the younger defendant, but imposed a fine of £5 against Mr. Lynch, senior.

At Hove Petty Sessions, Marianne Thwaites, of the Kerrison Arms Hotel, Hove, was summoned for selling to Harry Herriott, on November 26, three quarters of brandy which were not of the quality and substance of the article demanded.—Harry Herriott said he was sanitary inspector and inspector under the Food and Drugs Act for Hove. He went to defendant's hotel on November 26 and asked for three quarters of brandy. This he divided into three parts, one of which he gave to Mrs. Thwaites, the other he sent to the public analyst, and one he now produced. He told Mrs. Thwaites he had bought it for the purpose of analysis. The certificate (produced) from the analyst showed that 4 per cent. of water was added to 96 per cent. of brandy of 25 degrees under proof.—Mr. H. F. Gates, in defence, said he should not attempt to deny the facts, but he hoped the Bench would say this was a case in which it was not necessary to convict. He pointed out that to show the brandy had been reduced only to 25 per cent. under proof was a good defence, and said in this case it had only been reduced to 28.5. Mrs. Thwaites had managed this house a good many years, and nothing of the sort had occurred before. He called the manager of the hotel to speak as to defendant's care in the matter of spirits.—The Bench took a lenient view, and dismissed the case on payment of costs.

In the Dublin Police-courts on December 18 the following cases were heard:—Joseph Brady, of 42, Francis-street, was summoned, at the instance of Inspector Kane, for having sold whisky 30 degrees under proof, and therefore adulterated, the minimum degrees allowed being 25.—Inspector Kane, in the employment of the Corporation, deposed to the purchase of the whisky, and Sir Charles Cameron's certificate proving the analysis was put in evidence.—The defendant said he used no instrument to determine the condition of the whisky. The offence, if committed, was innocently committed, and he promised it would not occur again.—His Worship inflicted a penalty of £3.—Patrick Brennan, of 1 and 2, Bonham-street, was summoned, at the instance of Inspector Lyons, for having sold whisky which was 27 degrees below proof, and therefore an adulterated article. Mr. Gerald Byrne, solicitor, appeared for the defendant, and said his client admitted the offence, but it was inadvertent, and the adulteration, if any, was very trifling.—Mr. Swifte fined defendant £1.—Mr. Rice, solicitor, appeared in each case on behalf of the Corporation.—William M'Dowell, grocer, of 41, North King-street, was summoned by Inspector Lyons for selling whisky 29 degrees under proof, 25 degrees under proof being the lowest strength allowed by the Act of Parliament.—Mr. Rice, solicitor, appeared for the Corporation.—Sir Charles Cameron, in reply to his worship, said proof spirit contained 57 per cent. of actual alcohol.—Inspector Lyons gave evidence as to the purchase of the whisky. On the label of the bottle was the following: "Wholesale prices only charged. Strength 28 U.P., by distillation when bottled." The price of it was 1s. 6d. per pint.—Mr. J. M. M'Dowell, solicitor, who defended, said he pleaded justification.

According to the Act of Parliament, when they had given notice that the strength of the whisky was more than 25 per cent. the sale could not have been to the prejudice of the purchaser.—Inspector Lyons said he did not receive any intimation as to the strength at the time.—Mr. M'Dowell: Did you not read it on the label?—Witness: No.—Mr. Wall thought that witness might have been struck by the price of the whisky. He asked witness if he knew what was the duty on whisky?—Witness said he did not exactly know.—Mr. Wall: Did you expect to get the whisky for the price of the duty? No.—Sir Chas. Cameron, in reply to Mr. M'Dowell, said the strength of the whisky would decrease in cask, but could not in bottle, if there was a sound cork.—Assuming that it was 28 per cent. when bottled, was it possible that it would be 29 per cent. when you examined it? It is not possible with a sound cork. It will remain the same strength *secula seculorum* if the cork was sound.—But when it was being divided into three parts would it deteriorate? Oh, that was only momentary. It would not.—Mr. M'Dowell, proprietor of the establishment, was sworn, and deposed that he himself had tested the whisky before bottling it, and it was then the strength stated on the label. It might have been bottled a month ago.—To Mr. Rice: His hydrometer had been tested three months ago.—Mr. M'Dowell, solicitor, said the mere fact of his client having intimated that the whisky was below the strength which was deemed to be the strength by Act of Parliament was enough to save him from all liability. He quoted sections from Acts of Parliament to support his contention.—Mr. Wall said there was no fraud in that case, but there had been a violation of the law to the extent of one per cent., and although that only represented a wineglass of water to a gallon of whisky it was still a violation of the Act of Parliament, and he would impose a fine of 20s.—Mr. M'Dowell, solicitor, asked his worship to state a case for the Queen's Bench.—Mr. Wall: I shall do nothing of the kind. Show me the question of law in it.—Mr. M'Dowell said he would apply to the Queen's Bench.—Paul Troy, 12, Beresford-place, was summoned by Inspector Kane for selling whisky 31 per cent. under proof, 25 degrees being the lowest allowed under the Act.—Mr. Eustace Johnston, who defended, said his client had been ill for some time and could not account for how the decrease had occurred. He did not keep a hydrometer, and he asked that a mitigated penalty be imposed.—Mr. Wall fined defendant £3.

At Wakefield, on December 18, Mary Athey, landlady of the Station Hotel, Crigglestone, was summoned by Mr. Hammond, inspector under the Food and Drugs Act to the Wakefield Rural Council, for selling whisky 10.6 under the legal strength.—Mr. Lodge, for defendant, admitted the charge, and said that it arose through a mistake. Mrs. Athey was in the habit of adding a quart of water to a gallon of whisky, and it was supposed that while she was doing it she was called away, and so must have weakened it twice.—To pay £2 7s. 6d.

At Preston, on December 19, Nicholas Halliwell, landlord of the Smiths' Arms public-house, Lea, near Preston, was summoned for selling adulterated whisky. Sergeant J. Fenton (Kirkham) proved the purchase of two samples of Irish and Scotch whisky, which contained respectively 34 and 38 per cent. of water. The percentage allowed by law was 25.—Defendant was fined £2 and costs in the first case, and ordered to pay costs in the other.

COWS ADULTERATE THEIR MILK!!!

MR. F. J. LLOYD, every-sort-of-analyst-in-general, once said something about cows yielding adulterated milk, and a Mr. Beaton, of Chard, is the latest awful example who has heard of it. Since we published the extraordinary story of the 8 per cent. water cows, a long

time ago, and asked Mr. Lloyd to furnish the figures of the startling analysis, we have seen many statements that cows adulterate their own milk—we suppose to avenge themselves upon some unpopular dairyman—but we have never seen Mr. Lloyd's analytical figures. They are—like Junius and the Man in the Iron Mask—a mystery. It will rejoice the heart of Mr. F. J. Lloyd to find that he has a believer in a Mr. Beaton, of Bath-street, Chard. On December 9, Charles Henry Hallett, dairyman, Chard, was summoned for selling adulterated milk.—P.C. Catley said he purchased a pint of it and offered to return a part, which defendant declined. About twenty minutes later he saw Hallett in Mill-lane, and he then asked witness to purchase another pint. He refused to do so.—Supt. Rawlings produced a sample of the milk in question, which the public analyst at Taunton certified contained 10 per cent. more water than it should.—Mr. Beaton, of Bath-street, Chard, said defendant bought his milk from him. He admitted the milk on the morning in question was poor, because it was the first milk from four cows, and the first milk from cows in the morning was always thin and poor. This was how he accounted for the milk containing such a large percentage of water. The fact of 10 per cent. additional water being in defendant's milk would only make a difference of 4d. to him per morning. *Witness added that it was a well-known fact that some cows always gave adulterated milk.*—Defendant said he delivered the milk exactly as he received it from Mr. Beaton.—The ex-Mayor said this milk was sold to the poor, and it was only right that they should be protected.—A fine of 10s. and 5s. costs was inflicted.—Mr. Beaton: I shall pay, because I believe he delivered the milk as it left me.

MODERATE ADULTERATION.

At the South-Western Police Court, London, last week, the adjourned summons against William Rattray, trading as William Rattray and Son, milk sellers, of 46, Webb's-road, Battersea, for selling milk adulterated with eight per cent. of water, came on for hearing. The summons had been adjourned to enable the defendant to obtain the opinion of the Somerset House authorities, as to the quality of the milk. The certificate of the authorities was produced, showing that the adulteration of the milk did not exceed four per cent. Mr. Denham, having regard to the small adulteration, ordered the defendant to pay the costs only.

A CHANCE FOR ANOTHER BARNEY BARNATO COMPANY.

PROFESSOR LIVERSIDGE, of Sydney University, has made chemical experiments which show that there are over 100,000,000,000 tons of gold dissolved in the ocean-water of the world, basing his calculation on the rate of one grain per ton, which he found in the water on the Australian coast. It is a pity all this gold should be wasted, and as it is there, and only requires the getting, it is as tangible as many of the Barnato assets and would justify the flotation of, say, a £50,000,000 company about as well as some of the Barnato flotations.

PURE MILK IN NEWCASTLE.

An extremely interesting demonstration in the filtration and sterilisation of milk took place at Newcastle, on December 18, before a select company of medical men, veterinary surgeons, and others, at the premises of the Farmers' and Cleveland Dairies' Company, Limited, Westgate-road, Newcastle. Amongst those present were Mr. Clement Stephenson and Mr. Wm. Hunter, veterinary surgeons; the Sheriff (Mr. John Beattie); Dr. Ellis, Dr. Pattinson, Dr. Smith, Dr. Ruxton, Dr. Richardson, and Mr. Wells, sanitary

inspector. The process consisted of the upward filtration of milk by centrifugal force, the separation of milk (by which a considerable amount of unsuspected dirt and other deleterious matter is removed), the Pasteurisation of milk (by which all micro-organisms or bacteria are removed or killed), and the sterilisation of milk (which is bottled and hermetically sealed by machinery at the boiling point). In the filtration the milk is forced through a very fine brass sieve—so fine that it looks almost like a sheet of mica or thin glass. It is then put into the separator, kept whirling at the rate of 6,000 revolutions a minute, which dislodges all extraneous matter. The manager, Mr. Stableforth, showed the company a basin of gelatinous substance, said to be principally dirt, which had been taken by this process from 30 gallons of milk. Afterwards, in the Pasteurisation, the milk is trickled over a corrugated zinc board, heated at the top to 170 degrees, and cooled at the bottom to about freezing point, so that the sudden change from hot to cold completely destroys all bacteria or disease germs which may then remain. Then the sterilisation is completed by the bottling at a temperature of 212 degrees Fahr. in air-tight vessels. The process was watched with great interest by the company, several of whom took away samples of the residuum for analysis. The perfect state to which the scientific apparatus for thus dealing with one of our staple foods has been brought was matter of general comment, and those present expressed their thanks to the company, through the manager, for the opportunity given them of seeing the process. It may be remarked that the price of Pasteurised milk is 2d. and 4d. per bottle (approximate pints and quarts), and of sterilised milk 2½d. and 5d. per bottle. In the year ending April, 1895, the company's sales of new milk in Newcastle and Gateshead were 1,802,675 pints, and at April, 1896, they were 3,232,456 pints—an increase in one year of 1,429,781 pints.

A BUTTER WARRANTY.

At Manchester on December 27, before Mr. J. M. Yates and other magistrates, John Makeague, of the firm of Messrs. Hunter and Co., butter merchants, Hanging Ditch, was summoned for having infringed the Food and Drugs Act by giving a false warranty relating to certain Irish butter.—Mr. Hockin, who prosecuted on behalf of the Royal Lancashire Agricultural Society, said that on the 10th inst. a retail dealer named Balmer was summoned for selling butter which contained an excess of water. At the hearing of the case the defendant put in a warranty given by the defendant's firm. In consequence, the case was dismissed, and a summons was taken out against the defendant.—Inspector William J. Parkinson repeated the evidence he gave at the hearing of Balmer's case. He visited the shop on November 9 and bought ½lb. of butter, which, on analysis, was found to contain 21.08 of added water. Reginald Balmer said he purchased the butter from Messrs. Hunter and Co., and received an invoice with the warranty attached to it.—For the defence it was pleaded on behalf of the firm that they purchased the butter as pure, and unless every cask of butter sent to them from the farm was analysed it was quite impossible to discover if there had been adulteration.—Mr. Yates said it was clear that the butter contained the amount of water (21.08) stated, whereas it should not have contained more than 17 or 18 per cent. He did not believe, however, that the Manchester trade added water to the butter, but sold it as they received it. He imposed the minimum penalty of 20s. and costs.

DRUGS.

At the Sittingbourne Petty Sessions, on December 21, Raymond Robinson, chemist, of Sittingbourne, was summoned under the Food and Drugs Act for having

sold nitrous ether which was below the legal limit of strength. For the defence, Mr. Robinson showed that, notwithstanding every precaution that had been taken, the spirit was constantly undergoing a process of reduction by evaporation.—The Bench dismissed the summons.

MEAT.

At Handsworth, on December 24, Caroline Griffin, poulterer, 171 and 172, Soho-road, was summoned for exposing for sale rabbits unfit for human food.—Mr. Henry Ward prosecuted on behalf of the Handsworth Urban District Council.—On November 27, as Albert Hodges, inspector of nuisances, was passing along Soho-road, he noticed an offensive smell proceeding from defendant's shop. He saw lying on a slab at No. 172 seven skinned rabbits labelled 7d. each. Next door there were three rabbits amongst others on a rack, also exposed for sale. These were in a putrid condition. He seized the rabbits, and Dr. Parkes afterwards ordered them to be destroyed. Defendant's husband subsequently called at the Public Buildings, and the inspector informed him what he had been ordered to do. Griffin said that he intended having the carcasses examined by an expert from London. Consequently, at Griffin's suggestion, the rabbits were placed in the public mortuary in Gold's Hill-road, to arrest, as much as possible, the decomposition which was rapidly taking place. Shortly before six o'clock Griffin brought a medical man, who examined the rabbits. Whether the result was favourable or not did not transpire. However, on Hodges informing him that they would then be destroyed, Griffin protested, saying "that he had still three other experts to come and examine them." Willing to afford the man every facility for preparing his wife's defence, he (the inspector) refrained from destroying the rabbits till after eight o'clock. Before doing so Hodges took the rabbits to Dr. May, the medical officer of health for Aston. Hodges then consigned his offensive cargo to the destructors in Chester-street.—Dr. Richmond said that blood-poisoning might have resulted from eating the flesh of the rabbits.—The magistrates said that defendant did not seem to realise the gravity of the offence. She would be fined £5, including costs, or three months' imprisonment.

At Linlithgow, on December 18th, before Sheriff Substitute Melville, John Marshall, grocer and butcher, Blackridge, was charged, at the instance of John Frew, sanitary inspector, with having had on his premises on 17th November, 148lbs. or thereby of butcher meat which was found to be diseased and unfit for human food. The Sheriff imposed a penalty of £10, with £2 expenses, the alternative being one month's imprisonment.

BEEF STEARINE AS A LARD ADULTERANT.

MR. C. A. SEYLER, county analyst for Glamorgan, in his last report says:—

"It has been contended that the addition of beef stearine to lard is necessary, for without such an addition it is alleged that the lard will not set or keep in hot weather. In this connection I am prepared to say that properly prepared lard will set and keep in hot weather without any addition of beef stearine, and I have in my possession a sample of lard prepared without stearine which has withstood the intense heat of the past summer without becoming rancid. Pure lard, as recognised by the trade, is exactly what it professes to be, and is prepared from the 'flick and back fat' of pigs, not from the intestinal fat. I am aware that there is an article said to be prepared in America,

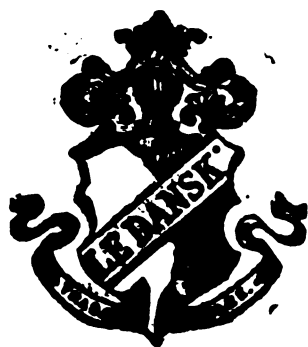
and perhaps elsewhere, from the fat of pigs (including the intestinal fat, not from the flick and back fat alone), which is called 'lard,' and it is difficult to get this to set without the addition of beef stearine. In Great Britain the intestinal fat is used solely for making cheap dripping and tallow candles. This is very different from, and much cheaper than, pure lard. It is wrong to call such a mixture by the name of lard, and fraudulent to charge the price of pure lard for it, and I am of opinion that beef stearine is added in order to conceal the inferior quality of the substance, and to enable the seller to obtain for it the price of pure lard. It should also be remembered that one pound of beef stearine is sufficient to conceal the inferior quality of about seven pounds of this so-called lard. I beg to append the notice, which recently appeared in FOOD AND SANITATION of the beef stearine in lard case at Llandaff. It will be noticed that it is signed by some of the best known firms of bacon curers in the world, twenty-one in all, and among them C. and T. Harris and Co. (Limited), Calne, the Wiltshire Bacon Curing Company, Chippenham, and others. The testimony of such well-known firms, all of which, I am informed, belong to the Bacon Curers' Society of Great Britain, is of the greatest value: 'Attention has been directed to the statement reported to have been made by Mr. Sankey, of Cardiff, who supplied the lard which was the subject of the prosecution, viz., that "there was no such thing as pure lard known during the hot summer weather; that what was recognised as pure lard throughout the trade generally contained about 16 per cent. of beef stearine; that the only time that pure lard was actually sold was at Christmas, and that beef stearine was of the same value as pure lard." In the face of such an erroneous statement on the part of one who, being in the trade, might be considered more or less of an expert, we think it only fair to ourselves to give publicity to the following:—(1) That we, the undersigned firms of English and Irish bacon curers, declare emphatically that we have never put beef stearine or other foreign substances in lard, and that we have never sold any lard that has not been absolutely pure hogs' product. (2) That good hogs' lard, even in the hottest weather, does not require stiffening of any sort. (3) That pure lard as recognised by the trade, is exactly what it professes to be.—We are, etc. (Signed), Adye & Hinwood, Malmesbury; W. F. Biggar, Londonderry; Bowyer, Philpot & Co., Trowbridge; Buttle Brothers, Ennis-corthy; G. R. & B. Calcott, Bristol; Coey & Co., Limited, Belfast; Henry Denuy & Sons, Limited, Waterford, Limerick, and Cork; James Dole & Co., Limited, Bristol; C. & T. Harris & Co., Limited, Calne; Highbridge Bacon Factory, Limited; Kehoe, Donnelly & Pakenham, Limited, Dublin; Lunham Brothers, Cork; D. McCartney & Sons, Ballymena; J. Matterson & Sons, Limerick; Morton & Simpson, Ballymena; H. Naish & Son, Bristol; Oake, Woods & Co., Limited, Gillingham; Executors of J. J. Richardson, Waterford; W. J. Shaw & Sons, Limerick; Spear Brothers & Clark, Bristol; Wiltshire Bacon Curing Company, Chippenham.' All samples of lard received during the past quarter were genuine, the lately prevalent practice of stiffening this article with beef stearine having become much less common."

It was resolved to take proceedings in all cases of addition of beef stearine to lard.

DANGERS OF TINNED FOODS.

A YOUNG woman named Caines, living with her parents at Poole, had some tinned salmon for supper on Sunday night. She retired to bed in her usual health. Early the next morning she was found by her father dead. A doctor who was called in expressed the opinion that death was due to an irritant poison, probably the salmon. An inquest will be held.

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(Signed) S. ARNAUD."

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Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

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Food and Sanitation.

SATURDAY, JANUARY 9TH, 1897.

ANOTHER SINISTER LESSON FOR THE "LANCET'S" FARCICAL LAMP COMMISSION.

AT St. Bartholomew's Hospital, on December 30, Mr. S. F. Langham, the City coroner, held an inquest concerning the death of Sarah Uridge, aged forty-two, the wife of a printer, living at 24, Coburg-street, Clerkenwell, who was fatally burned through a paraffin lamp explosion at that address on Boxing Day.—William Uridge deposed that he had a small party on Christmas night, there being so many persons present

that the room would scarcely accommodate them. About two o'clock on Boxing morning the deceased was refilling a paraffin lamp whilst it was alight, when the lamp, which had a glass reservoir, suddenly exploded in her face. Her clothing was seen to be on fire, and she was so severely burned about the body that she died soon after she was taken to the hospital on a fire-engine.—Frederick Faulker, a lodger in the house, stated that upon hearing the sound of the explosion he ran upstairs and burst the door of the room open. He rescued several children from the flames, which had spread amongst the party, and in doing this he severely burned his right arm. Several other persons were also burned and had to be medicinally treated for their injuries.—Thomas Pearch, foreman fireman at the Farringdon-road station, said that on arriving at the house he found the deceased lying outside on the pavement, an ambulance having been sent for. Finding the fire was extinguished, the witness at once carried the deceased into the house, and treated her burns with such things as he had on his engine—oil and lint, etc.—and, as the ambulance had not arrived, the witness had the woman taken to the hospital on the engine.—Mr. Gibbons of the County Council (petroleum department), deposed that he had investigated the case, and found that the explosion was due to the fact that, the lamp having burned for ten hours, the reservoir became filled with heated vapour in the place of the oil, and when it was refilled the flame came in contact with the vapour. Mr. Gibbons said that during last year there had been no fewer than forty-three deaths in London through the explosion of lamps with glass reservoirs.—The jury returned a verdict of accidental death.

Exactly, and if the oil had not been the murderous American refuse oil, which, for reasons best known to itself, the *Lancet* is championing, it would not have given off the vapour which caused the explosion. American millionaires have had a long innings with their murderous monopoly, but, even supported as they are by the *Lancet*, a few notorious "experts" and questionable public officials, we have faith in the truth prevailing before long. If it does not, we shall deem it necessary to go deeper into the causes of the persistent and unblushing lying which is being done in the interests of the American oil gang. A life per day is sacrificed and untold misery caused by the 73° Abel flash-point. If only oil of 100° to 120° were permitted to be sold for lighting purposes there would be no such sacrifice of English life and property. When the House of Commons Select Committee resumes its enquiry it should investigate the curious circumstance referred to by Dr. Stevenson Macadam recently in a paper he read at the Manchester Society of Chemical Industry.

Dr. Stevenson Macadam pointed out that in 1870 he investigated and reported on mineral oils for lighthouse purposes, recommending 150° open test for the flash point. Eventually 120° close was settled on, and with

such oil not a single accident had occurred in the northern lighthouses for the past twenty years. The first attempt at the regulation of the flash point of oils was made by the Government in 1862, and in the Act then passed permission was given to search for oil flashing below 100° F. in the same way as for gunpowder. Owing to the absence of definite instructions as to how to test the flash point, errors and differences were constantly arising, so that in 1860 Messrs. Abel, Attfield, and Letheby agreed on a specific test of 100° F., in an open cup, half full of oil and heated by a water bath. This test, the author stated, had been found in practice to give results agreeing substantially with those obtained in Prof. Abel's apparatus, which was subsequently introduced and is to-day the standard tester. *Strange to say, however, within a week of the drafting of the schedule embodying his specified test (which was the conjoint production of the gentlemen named above), the directions for testing were cancelled, Sir J. Ferguson, who had charge of the Bill, explaining that he had done so on the advice of the Petroleum Association and Sir F. Abel (then Prof. Abel), and this advice was followed, despite the protests of the other experts who had co-operated in the formulation of the revised method.* In 1876 the Abel tester was introduced (an excellent apparatus *per se*), and it was then contended that the difference between the old open test of 100° F. and Abel's close test was 27° F.; the standard of safety was therefore reduced to 73° F. and remains there to-day. Had the standard of 100° been adhered to during the last ten years there would have been many fewer fires from the employment of mineral oils, and many lives would have been saved.

We think we know who engineered this advice and secured the "burking" of the test originally agreed on. Doubtless, the same sanctimonious scoundrels who contrived explosions, murder, and arson in their competitors' refineries in America, who have bribed judges, Congressmen, and senators there, and who boast that they can just as easily "noble" or humbug our Select Committee of the House of Commons here. Well, we very much doubt it, *i.e.*, if our Select Committee has an opportunity of knowing the truth or insists upon learning it. A Congress investigation records in 1888, pp. 818 to 873, how this American oil gang bribed an employé of an oil distillery at Buffalo, antagonistic to them, to cause an explosion. This employé weighted down the safety valve with heavy iron and packed it with plaster of Paris, and then ordered the fireman to put coal into it until the fire-box was cherry-red. When this was accomplished he went away from the works, leaving the unsuspecting victims of this infernal work to explosion and roasting alive. Fortunately, the dastardly work was not well enough done, and the safety valve lifted itself, for, despite weights and plaster, the unusual pressure blew it open, and it did not keep the gases in to explode as had been planned by the American Oil gang. For this villainy some members of the gang were put upon their trial and convicted, but they were powerful enough to bribe the

law, and, although the jury on May 18, 1887, brought in a verdict "guilty, as charged in the indictment," an accommodating judge fined the criminals *two hundred and fifty dollars each*. He got his reward later in preferment to a supreme judicial position in America. The *New York World* said of the sentence: "It is calculated to make men, of more boldness than morals, blow up factories."

Our House of Commons Committee is, we suppose, in a measure committed to hearing the evidence of the emissaries of these scoundrels, but knowing the source from whence it emanates they can appraise it at its true value. In the meantime, no self-respecting journal or person can congratulate the *Lancet* on the men and the cause it is championing.

BUTTER.

MATTHEW CHARLES COOMBS, grocer, carrying on business in Endless-street and Fisherton-street, was summoned, at Salisbury Petty Sessions, for selling on November 25th, a certain quantity of butter which was not of the substance and quality demanded by the purchaser. Mr. W. H. Jackson appeared for the defendant, who pleaded not guilty.

P.C. Thomas stated that a little after eight o'clock on the day in question he entered defendant's shop and asked for half-a-pound of butter, for which he paid sixpence, and which defendant's assistant served him with. Mr. Mathews then came into the shop, and said he was going to submit the butter to the public analyst.—By Mr. Jackson: Witness was in plain clothes, and the assistant Lockyear knew him to be a policeman. There were several articles on the counter, which included a small parcel labelled margarine.—By Mr. Mathews: The word "Margarine" was not very plain, but it was visible to the public.

Supt. Mathews said he entered defendant's shop and received from the last witness half-a-pound of butter which he had purchased. He told the assistant it was for the purposes of public analysis. He cut the butter into three parts—one for himself, one for the public analyst, and one for the defendant—and as he was putting them into the usual packages defendant came into the shop. Witness said "Mr. Coombs, I have purchased some of your butter to be analysed." Defendant said, "It is rather sharp, is it not?" Witness replied, "There is nothing sharp about it. I have purchased it from others, and I have purchased it from you." Witness added that he had previously had some butter of defendant's tested, and found it wrong, and that was why he was purchasing a sample for analysis now. Afterwards defendant said he had run short of butter, and he had borrowed the quantity, from which that bought by Thomas had been taken, from another tradesman in the town, and he was not certain whether it was right or wrong. He (witness) said "If you tell me the name of the tradesman, I will test his also and see if it is right." Defendant would not give witness the name. Witness sent the butter for analysis, and he had received a certificate to the effect that it consisted of margarine.

Mr. Jackson then addressed the Bench on behalf of the defendant, and said that in consequence of the evidence of the policeman, and which he was not there to dispute for one moment, he was desired by Mr. Coombs to withdraw the plea of "not guilty." Mr. Coombs now stood before them guilty in the eyes of the law, but he (Mr. Jackson) wished to place the circumstances before the Bench, and he was confident that, although they might find it necessary to vindicate the

law in this matter in finding the defendant guilty of the offence with which he was charged, he would leave the court without being guilty of any moral offence. The circumstances were as follows:—Mr. Coombs had two establishments, one in Fisherton-street and one in Endless-street, living at the latter place. In his Fisherton establishment no margarine was sold, but it was at his place of business in Endless-street. When Thomas entered the shop on the day in question, it was about ten minutes past eight, and the shop had only just been opened. Lockyear, the assistant, who knew the witness Thomas to be a policeman, was asked for a pound of butter, and cut it from a lump of material which was certainly a mixture, but it contained 50 per cent. of real, creamy, Danish butter. But now the question arose what motive could his client possibly have had in committing the act of commercial suicide alleged against him? When Thomas called at the shop, Lockyear was aware that there was plenty of genuine butter on the premises at the back. But to get it he would have had to call down Mr. Coombs, who was at breakfast: they would then have had to get a fresh keg, and the butter would have to go through the process of scraping, etc. All this would have taken up time, and probably the customer would not have waited. The only explanation he could give of Lockyear's action was that rather than lose his master a customer through his not waiting, he, on the spur of the moment, cut the butter off the lump of margarine—which was marked at 10d. In the shop was margarine sold at 6d., 8d., and 10d., but as the article in question was cut from the 10d. lump it was clear that if Lockyear had had any improper intention, he would only have saved his employer a penny, and so it was not likely a risk would be deliberately run for so trifling an amount. He contended that the whole circumstances pointed to the want of guilty knowledge on the part of Mr. Coombs, and asked that the defendant should not be harshly dealt with for a fault which his employé committed on the instant, in the fear, as suggested, that he might lose a customer by delay.

Edward Lockyear, an assistant in the employ of defendant, said he remembered the constable coming into the shop on November 25, and asking for the butter. He cut from a block of mixture, which was not butter. Mr. Coombs was not aware of this. There was no butter in the shop, but there was plenty in another part of the establishment, but to open the tub and scrape the butter would take a quarter of an hour or twenty minutes. He knew Thomas to be a constable, and his evidence was quite correct. He did not receive any instructions from his master with reference to selling the butter in question when genuine butter was asked for.—By Supt. Mathews: He was aware he was supplying the constable with margarine, although butter was asked for.

Defendant also gave evidence. He stated that on previous occasions, when he had run out of butter, he had borrowed from other tradesmen. He at first thought that the butter sold to the constable was from a lump borrowed from another tradesman in the city, but he had since ascertained that the butter which he had borrowed had been sold out the day previous to the visit of the constable. He did not come down into the shop until the assistant had made the transaction. They kept margarine at 4d., 6d., and 10d., and also pure butter at 10d.

The Bench consulted together, and said they had given careful attention to the case. They recognised that employers were sometimes placed in awkward positions by the action of their employés, but that fact did not in such a case as this relieve the employers of their responsibilities, or shift it on the shoulders of their employés. They considered this case a bad one, and must inflict a penalty of £5, which would include costs.—The money was paid.

MEAT.

At Clerkenwell, on December 19, William Powell, butcher, of Wendon Lee, Saffron Walden, was summoned by Sanitary Inspector Billing, on behalf of the Holborn District Board of Works, for causing to be deposited for sale at Link's shop, No. 91, Cowcross-street, Smithfield, a carcase of mutton which was unsound and unfit for food.—Mr. Munro prosecuted, and Mr. Thorneycroft defended.—The inspector said the meat, when he seized it, had attached to it a label bearing the words: "One calf and one sheep are sent subject to inspection. If not fit for human food, to be destroyed." This label was sent by the defendant with the consignment of meat to the Smithfield butcher. The mutton complained of was totally unfit for food and was condemned the day it was seized by the Clerkenwell magistrate.—After further evidence had been given, Mr. Horace Smith said he had no doubt that the defendant, when he attached the note to the consignment of mutton, had a suspicion about its fitness for food. The label was evidently sent for the purpose of providing him with a defence if the meat was condemned. The defendant must pay a fine of £20.

BEFORE Bailie M'Cutcheon at Glasgow, on Dec. 24, James Stevenson, butcher, 44, High-street, Glasgow, and Gibson Gillilan, mole-trapper, Hillhead, Balfron, were charged, Stevenson with having had in his shop for sale for human food the carcase of a pig which was unsound and unfit for human consumption, and Gillilan with having sold the carcase to Stevenson. They pleaded not guilty.—Inspector Young stated that on the 11th inst. he received information that two men had that day been offering for sale the carcase of a pig at a low figure. Having suspicions, he made inquiries regarding it, and along with Inspector Warnock he traced the carcase to Stevenson's shop. The carcase was quite unfit for human food.—Inspector Warnock corroborated, stating that Gillilan admitted to him that he got the carcase from a farmer for nothing, and that he sold it to Stevenson for £1.—Dr. Chalmers said that the pig seemed to have died from internal inflammation, and the carcase was unfit for human food.—Mr. George Neilson, Procurator-Fiscal, said it was emphatically a case in which the power that his Honour possessed, of sending the accused to prison without the option of a fine, might very well be exercised.—Mr. Gillilan said he was informed by an experienced man that the carcase was quite fit for human food, or he would not have sold it.—The Magistrate found both the accused guilty. He fined Gillilan £10, with the option of 40 days' imprisonment, and Stevenson £5, with the option of 30 days' imprisonment.

At Eddisbury (Cheshire) Petty Sessions on Dec. 28, John Bebington, butcher, Over, was summoned for having in his slaughter-house diseased meat which was intended for human food, and John Brooks, farmer, Darnhall, was summoned for aiding and abetting. The Winsford Urban District Council prosecuted, through their clerk (Mr. J. H. Cooke). The evidence showed that Brooks sold for 7s. a cow suffering from tuberculosis to Bebington, who prepared it and hung it up in his slaughter-house.—Mr. Cooke said that if some butchers got hold of a diseased cow and found they could not send the whole of it to Manchester, they cut off the diseased parts and sent the remainder on. It was a very serious matter, as disease might be spread in this way.—The defence was that the carcase was intended for pig food.—The Bench dismissed the case against Brooks, and inflicted the full penalty of £20 against Bebington.

ANALYSTS DIFFERING.

JACOB STIRLING, provision merchant, Wishaw, trading as Brown Brothers, and carrying on business at Arma-dale, was, at Linlithgow Sheriff Court, on December 18, charged with having, on November 17, sold to the com-

plainer, John Frew, sanitary inspector of the county, 1 lb. of salt butter which was not of the nature, substance, and quality demanded.—Accused pleaded not guilty.—Dr. Redman, public analyst for the county of Linlithgow, in the course of his evidence, said he had made an analysis of one of the parts of the butter, and found that it contained 24 per cent. of butter fat and 76 per cent. of fat not derived from butter.—For the defence, Dr. Clark, public analyst, Glasgow, gave evidence to the effect that he had also examined one of the parts of the butter purchased by Mr. Frew, and that he was of opinion that it was genuine butter, and that it contained no fat which had not been derived from milk.—After hearing further evidence the Sheriff said the evidence of the analysts had, unfortunately, been conflicting, and he had to believe one or the other of them. He was inclined to believe the evidence of Dr. Redman. At the same time, he thought there must be something wrong somewhere when the opinions of two such eminent analysts were so conflicting. He found the charge proven, and imposed a penalty of £10, with the alternative of a month's imprisonment.—The defender gave notice of appeal.

MARGARINE.

At Dublin, on December 29th, Michael Horan, 48, Upper Grand Canal-street, was summoned, at the suit of the Pembroke Township Commissioners, for having, on the 13th November, sold as butter a pound and a half of margarine containing 70 per cent. of foreign fats. The defendant admitted the offence, and was fined 10s.

CHEESE.

At Clerkenwell last week William Park, of 51, Packington-street, Essex-road, was summoned by the Islington Vestry, for selling cheese containing 26 per cent. of foreign fat, other than milk fat. Defendant pleaded that he sold the cheese as he bought it, believing it was pure. He was fined 12s. 6d.

MILK.

At Hove Petty Sessions, on December 31, George Roger Weymark, 128, Western-road, Hove, was summoned for selling to Harry Herriott, Chief Sanitary Inspector, at Hove, on December 7, one pint of milk which was not of the nature, substance, and quality of the article demanded.—Mr. H. Prince, who defended, pleaded guilty, and explained that his client had carried on a milk business in Hove for the last seventeen years. The milk in question was sent out in its pure state, and was under the care of a man who returned with some milk watered. This milk was placed in a churn and left on the counter from 9.30 or 10 a.m. till about 11.30, when the inspector came in and purchased a pint of milk which was alleged to have been adulterated with 10 per cent. of added water. Mr. Prince suggested that the man who took out the milk had watered it and appropriated the additional pence gained in this way to his own use. Twelve samples of other milk in the shop were taken and analysed by Mr. Moore, who found them to be 40 per cent. over and above the requirements of the Act. Defendant had a contract with Mr. Moore to pay surprise visits to his men while on their rounds in order to see that the milk was of the proper quality. The man who brought back the adulterated milk had been discharged.—The magistrates considered that the defendant did not personally know of the adulteration, although he was clearly liable for the action of his servant. Fined 10s. and costs.

At Derby, on January 4, Edward Morley, of 2, Temple-street, was summoned for selling milk contain-

ing eight parts of added water on December 9.—Sarah Turner, of Provident-street; Rachel Barnett, of 67, Silverhill-road; and Frederick Lewis, of 38, Darley-street, were summoned for selling adulterated milk on the same day. In the first two cases there were five parts of added water, and in the third eight parts.—The Bench ordered each of the defendants to pay the costs of the case, believing the adulteration was only trifling.

SPIRITS.

At Beverley, on January 2nd, Mr. Thomas Rispin, of the Wellington Inn, Lockington, was summoned for an offence under the Food and Drugs Act. Deputy-Chief Constable Winpenny deposed that he purchased at the defendant's house on the 10th ult. half-a-pint of whisky. On submitting a portion for analysis it was reported to him that it was 30 degrees below proof. This was five degrees below the limit at which a vendor could escape conviction. Defendant, who had no excuse to urge, was fined £1 and the costs.

BEER.

At North London, on Dec. 30, Frederick Thomas Ware, landlord of the Duke of York public-house, Berger-road, Homerton, was summoned for diluting beer to the extent of 2 1-5th gallons to the 36-gallon cask. Mr. Albe prosecuted for the Inland Revenue, and Mr. Ware, solicitor, defended. Officers Driscoll and Rees (Inland Revenue) said that they visited defendant's cellar in October, and took samples from two casks respectively fined and unfined. The samples were sealed and delivered at the laboratory of Somerset House. Mr. J. S. Pullen, brewer to Messrs. Watney and Co., said he brewed the particular ale in question at a strength of 1056. Mr. Charles Henry Bird, analyst at Somerset House, said he found the unfined sample to be of 1055.9 strength, very closely coming to the evidence of the brewer; but the fined sample had only a gravity of 1051.72, which after allowing for half-a-gallon of finings, showed a dilution equal to 2 1-5th gallons to the 36-gallon cask. The defence was that Mr. Ware was ill at the time, and that his servants had done this without his sanction or knowledge. His family had been in possession of the house for 36 years; and he had held the license two years since the death of his mother. There had never before been a complaint against the house. Mr. Dickinson said the master was responsible for the acts of his servants, and fined the defendant £5 to include costs.

TINNED FOOD POISONINGS.

WE recorded last week the death of one person at Poole from eating tinned salmon. Dr. Robinson, who examined the body, attributed death to an irritant poison, and said that the fish which he examined was nauseous and unfit for human food. A verdict was returned in accordance with the medical evidence. The medical officer was asked to destroy all similar brands of salmon in the shop where the salmon was purchased.

Recently, several cases of poisoning through eating tinned beef have been reported from Liverpool. Mrs. Davies, of Bootle, bought a tin of corned beef on Christmas Eve at a shop near her house. The tin was opened on the following Saturday evening for tea, and all the Davies' family and two lodgers partook of it. Soon afterwards a son—a young fellow of 23—was taken so seriously ill that he had to be conveyed to the hospital. Then one of the lodgers was similarly seized, and went to the hospital, he being followed by Mr. Davies' three daughters, aged respectively 8, 12, and 18. The three latter were so bad that they were detained as in-patients. Mrs. Davies was herself next

seized with illness, although a doctor had treated her. On Monday night a man named M'Glennon and a woman named Harrison were admitted to the hospital suffering from poison, and they still remain there. They also had eaten tinned beef which is stated to have been purchased at the same shop. The police also report several milder cases of poisoning.

TINCTURE OF IODINE.

At Keighley, on December 22nd, Clara West, chemist, High-street, Keighley, was summoned for selling tincture of iodine not in accordance with the requirements of the British Pharmacopœia. Mr. Percy Naylor appeared for the defendant.—Arthur Randerson, the local inspector under the Food and Drugs Act, said that he visited the defendant's shop on November 4th, and purchased from Joseph Harrison, the manager, four ounces of tincture of iodine. A third of the quantity he forwarded to the county analyst for analysis, and his certificate stated that in grains per imperial pint the sample contained the following:—Iodine, 243·4; iodide of potassium, 367·5; rectified spirit, 7490·0; water, 647·5. Mr. Allen, in his report, went on to say that tincture of iodine of the British Pharmacopœia was directed to be made by dissolving $\frac{1}{4}$ oz. (218½ grains) of iodine and the same quantity of iodide of potassium in one pint of rectified spirit. The results showed that this sample was prepared with spirit somewhat below the strength of rectified spirit, and that the proportion of iodine was materially, and that of the iodide of potassium considerably, in excess of the proper quantity. Mr. Randerson supplemented the certificate by saying that there was an excess of iodine of twenty-four grains to every pint, and an excess of iodide of potassium of 148 grains per pint, and that the water should not be there at all.—Mr. Naylor, for the defence, said it was impossible to have rectified spirit without water, and that the variation from the Pharmacopœia as regarded iodine was insignificant. As to iodide of potassium, that was perfectly harmless, and used simply as a solvent. He characterised the case as trivial to the last degree, and asked the magistrates to dismiss it on payment of costs.—The magistrates adopted Mr. Naylor's suggestion. The costs amounted to £1 6s. 3d.

BEEF STEARINE IN LARD, AND BORIC ACID IN MILK, BUTTER, ETC.

THE Medical Officer of Health to the Glamorgan County Council, whose report on beef stearine in lard we, last week, in error, credited to the Public Analyst, Mr. Sayler, has, in the same report, the following very timely remarks anent the growing practice of surreptitious drugging of food. Dr. Williams says:—

"The present state of our knowledge of the physiological action of boric acid and borax is so imperfect that it is difficult to say what amount of these substances, if any, can be added, with safety to consumers, to articles of food, such as milk, butter, etc.

"It appears from Kobert's 'Intoxication' that cases of slight poisoning have frequently occurred, and occasionally death. The symptoms appear to be due to irritation of the gastro-intestinal canal, decomposition of the blood, and irritation of the nervous system. Large doses appear to cause diarrhoea, wasting, weakness of the muscles and of the heart, and purpura on the skin. Several authors have said that 40 to 60 grains of borax might be taken for several months without causing any disagreeable symptoms, but other observers saw symptoms of poisoning from these doses in man in the course of a few days. It was the opinion of Sir Andrew Clarke and others, that many diseases, the origin of which doctors were unable to trace, were attributable to the use of these and other antiseptics. It may be said, and with truth, that the addition of

borax or boric acid will tend to prevent the formation in milk of the poisons which may be produced by bacterial decomposition. But, at the same time, if dairymen are allowed to add boric acid or borax at their own free will, they will be under the temptation of keeping milk longer than they would otherwise do, and thus the public will, in the end, run the double danger of boric acid plus decomposing milk.

"The use of boric acid in milk is entirely prohibited in France, and some of the largest milk supply companies in the Metropolis entirely forbid it, thus showing that there is no absolute necessity for its use. At Birmingham convictions have been obtained for boric acid in milk to the extent of 60 to 65 grains.

"It seems to me that borax and boric acid should not be sanctioned as preservatives to milk, butter, etc., unless very stringent rules indeed are passed as to the quantity to be used, and in the present state of our knowledge regarding these substances, it would probably be better to prohibit their use altogether, for there can be no doubt that the principle is utterly bad, and the practice of drugging the public promiscuously and without their knowledge, and by incompetent persons, when they are in good health, is very dangerous."

At the present time Hanover-square, Wolverhampton, Birmingham and Glamorgan are the first, and appear to be almost alone in their enlightened work of safeguarding the public from amateur drugging. Dr. Williams deserves well of his county for his enlightened zeal in this and other health matters.

THE ADULTERATION ACTS IN BIRMINGHAM.

At Birmingham, on January 1, Mr. J. F. Brame and Dr. Leech heard a batch of summonses under the Food and Drugs Act.—George Hurst, dairyman, Digbeth, was summoned for selling butter containing 85 per cent. of foreign fat, and also for neglecting to affix a label to a quantity of margarine exposed for sale. The case being proved by Inspector Jones, a fine of £3 and costs was imposed in the first case, and a penalty of 20s. and costs in the second.—Thomas Clarke, 134, Dudley-road, provision dealer, was fined £5 and costs for selling butter adulterated with 65 per cent. of foreign fat.—Henry Morris, 261, Coventry-road, was fined £3 and costs for selling butter adulterated to the extent of 80 per cent.—David Elwell, 37, Stratford-street, was ordered to pay £3 and costs for selling milk containing 21 per cent. of added water, and deficient of 11 per cent. of natural fat.—Samuel Upton, 83, Turner-street, and Alfred Colbourne, 32, Marshall-street-south, were each fined £3 and costs for similar offences.—The prosecutions were conducted by Mr. Hiley, from the Town Clerk's office.

MORE VICTIMS OF SIR FREDERICK ABEL'S ADVICE.

THE explosion of a lamp at 56, London-road, Lower Clapton, caused a fire on January 5. It was soon got under, but Annie Salmon, 36, and Eliza Ramsdile, 48, were burned on the faces and hands.

THE funeral of Mr. T. E. Dinner, sanitary inspector of Falmouth, took place on Dec. 18, amid many manifestations of sorrow and respect, and a large and representative attendance. The coffin, which was covered with wreaths, was borne from the house to the hearse by the trustees and leaders of the society of Wesley Chapel, of which deceased was a member. Amongst those present were the Mayor (Mr. C. Deeble), the ex-Mayor (Mr. H. Liddicoat), Councillors S. Collins, W. Banks, H. C. Truscott, H. J. Kusden, J. Grose, and W. W. Phillips, and the borough officials,

HAPPY PLUMSTEAD.

"THE Plumstead Vestry have crossed the frontier!" says *Reynold's Newspaper*. "They have decided to 'do without a sanitary inspector.' The parish could do with a good one, however, and about half a dozen sharp assistants. Other London vestries may wonder why a sanitary inspector is not required. The question is easily answered. About 65 per cent. of this unique body is composed of house property owners. An inspector under the Food and Drugs Act might find active employment in the parish." We are pleased to see that even one newspaper devotes some attention to questions of public health. It comes like a breath of fresh air after seeing five columns in the *Jewish Daily Telegraph* extolling Christmas and Christianity.

WHOSE WAS THE VINEGAR?

AT Thames Police Court, on December 30, Morris Cohen, of 21, Buckle-street, Whitechapel, was summoned for selling malt vinegar diluted with acetic acid, coloured with caramel.—The purchase was made by an inspector under the Sale of Food and Drugs Act.—The analyst's certificate showed that the sample only contained 10 per cent. of malt vinegar.—The defendant said he bought the vinegar at 1s. 6d. a gallon, and bought it for pure vinegar.—Mr. Mead fined him 20s.

THE USES OF THE BANANA.

It is hardly necessary to state that well-matured bananas that have not begun to decay are a very wholesome and nutritious food. No more than that the biggest apples or pears always are the best, are the biggest bananas the finest flavoured; on the contrary, the larger they are the more mealy they taste. The cultivation of bananas, although it has in the last ten years assumed gigantic proportions, may still be said to be in its infancy. Almost every part of the plant can be used for some useful purpose; the stalk forms an excellent material for the manufacture of paper, or the fibre might be extracted; the peel of the fruit will make excellent indelible ink; the green fruit dried can be converted into wholesome flour. The fruit, when ripe, consists of seventy-four per cent. of water, of the remaining twenty-six parts twenty are sugar and two gluten of flesh-forming food. Hence, like rice, though exceedingly nutritious, it requires the addition of some more nitrogenous material. Green bananas, boiled tender, if given to the hens cut up, will make them lay more eggs than any other food. Dried bananas, or banana figs as they are called, are now in the market, and will undoubtedly soon be a great article of trade as soon as found by the schoolboy. They are sweet, wholesome and nourishing.—*The Sanitarian*.

"TRUTH" ON ANALYSTS' DIFFERENCES.

THE Public Analyst for Shropshire, Mr. T. B. Blunt, has, somewhat tardily, says Labby, written to me in reference to a note concerning a prosecution for alleged adulteration of ground ginger which appeared in *Truth* on September 24. Mr. Blunt gave evidence in support of the summons, another public analyst for the defence certified that the ginger in question was absolutely genuine, and the magistrates dismissed the case. My comments dealt chiefly with the statements in the newspaper reports that Mr. Blunt had previously made only three analyses of ground ginger, and that, according to the expert evidence on the other side, he had omitted the microscopical test, which was described as "by far the best." Since then Mr. Blunt has brought the matter forward at a meeting of the Society of Public Analysts, with the result that several well-known analysts expressed the opinion that the method he adopted in the case was correct, and that the microscopical examination was not the most important or

the truest test. I am now asked to mention this, and in fairness to Mr. Blunt I am glad to do so. Heaven forbid, though, that I should express any opinion of my own on the subject. It is one on which there would seem to be some differences among analysts—there was in the police-court at any rate—and what has occurred only shows once more how cautious judges and magistrates should always be in acting upon the testimony of scientific witnesses.

NOTTS TOWN COUNCIL'S BOROUGH ANALYST'S REPORT.

THE report of the Borough Analyst for the quarter ending December 31st, 1896, states that during that period 55 samples had been analysed, ten of these being adulterated. They consisted of five samples of milk, three of mustard, and one of whisky.

SANITARY INSPECTORS' ASSOCIATION.

ARRANGEMENTS FOR THE SESSION 1896-97.

February 6.—"Practical Meat Inspection," by G. B. Billing, Meat Inspector, Holborn Board of Works. Carpenters' Hall, 6 p.m.

March 6.—Annual Dinner, Venetian Chamber, Holborn Restaurant.

April.—Paper by Dr. M. A. Adams, F.R.C.S., F.G.S., etc., M.O.H. Maidstone. U.D.C. Carpenters' Hall, 6 p.m.

May.—"Some Nuisances from certain Offensive Trades and Methods of Abatement," by Mr. T. W. Crocker (West Ham). Carpenters' Hall, 6 p.m.

THE SANITARY INSPECTORS' ASSOCIATION.

A MEETING of the Lancashire and Cheshire Branch of the Sanitary Inspectors' Association was held on December 19, at the Manchester Technical School. There was a good attendance. In the earlier part of the afternoon members of the Association had the advantage of inspecting a collection of technical appliances, lent by the authorities of the school. Afterwards Mr. J. Ratcliffe (chief lecturer on Sanitary Science at the Manchester Technical School), delivered an address on "A Sanitary Inspector's Duty with regard to House and Drainage Inspection." Mr. Shawcross (Withington), presided. The sanitary inspector, Mr. Ratcliffe thought, was much undervalued by the general public whom he served. This was proved by the selection of inspectors, by some local authorities at least, from men who had no knowledge of the work which at any time they might be called upon to perform. Certain authorities, evidently under the impression that no skill was required, were in the habit of choosing for such places policemen, railway porters, unsuccessful tradesmen, or men who had failed in every other walk of life. There was another kind of authority, too, that thought there ought to be no proper pay attached to these posts, but some small acknowledgment of the services rendered by the inspector. This was a wrong to the public, who had every confidence in their representatives, and if these unqualified men continued to be appointed it would, in the end, lead to a great injury. The sanitary inspector was the guardian of the public health, and the sanitary inspector, he thought, had reform in this matter in his own hand. He did not advise them to strike for increased pay—that would come in time,—but every inspector should endeavour to raise the standard of his occupation. The Association which they had formed, well supported, would help them to gain their objects. But the inspector, above all things, must have a good knowledge of the scientific portion of his work, and be ready to put it carefully into practice. These were men who would be dreaded by the jerry-builder and the owner of old-

fashioned property. After impressing upon his audience the necessity of a close acquaintance with natural laws, the lecturer proceeded to explain the main principles of sanitation, illustrating his subject with lantern views and diagrams.—A vote of thanks was given to Mr. Ratcliffe for his lecture.

A SANITARY INSPECTOR'S PROPERTY.

THE miserable way in which even well-to-do people sometimes live was illustrated at an inquest at St. Marychurch on December 29, says the *Western Morning News*. On Christmas day, Caroline Mary Jane Dyer, housekeeper, dined with her master on roast turkey, plum pudding, and brandy sauce. Two days later she was found dead in bed under shocking conditions. Her body was absolutely naked, excepting a ragged, cotton bodice around her shoulders, there was no clothing on the bed, and the mattress was wet and filthy, while the condition of the house was almost indescribably bad. Yet the master whom she was supposed to serve has a private income of £150 a year, in addition to money he is said to receive from a wealthy brother in the North of England. At the inquest on December 29 the old gentleman (William Lynch) was in a sad state—feeble, poorly clad, badly cared for. He is hard of hearing, and seemed to wander in his mind while trying vainly to fathom the questions put to him by the coroner. He did not know where he lived. P.S. Hockridge had to tell him it was 2, Moor View Terrace, Plainmoor. The woman was fifty years old, he had known her twenty years, but first knew her when she was ten. It puzzled him sorely when Mr. Hacker, coroner, said that could not be right, and he asked, helplessly, "It's clear, isn't it?" He protested against the suggestion that he had lived with the deceased. "She didn't suit me for any matrimonial purpose," she was merely his housekeeper, and had been with him about ten years. Her mother before her used to make him very comfortable. A chair was procured for him, and the coroner told him he could sit down. "Yes, I will directly, but I must see there is a bottom," and it was with some difficulty he was persuaded to sit. After Christmas Day, he said deceased was very bad, and her speech seemed deficient. He could not tell what day she died; "I don't take notice of time." The second day after Christmas was as near as he could get at it. Then he went into her room in the morning and found her dead, lying partly on the bed and partly on the floor. The old gentleman had an old-fashioned, genteel manner, and wore what appeared to be a valuable signet ring.—Evidence as to the condition of the house, and the habits of the deceased and her master, was given by neighbours and others.—Mrs. Selina Crook lives opposite, and apparently did all the cooking, while what other work was done was performed by Mrs. Warne, of Ellacombe. Deceased always called Mr. Lynch "her gentleman." She had not been out of the house for two years, though apparently in good health. When she wanted anything she would shout across to Mrs. Crook. She was extremely dirty, and wore any old rags she could get—men's overcoats, and so on. When Mrs. Crook hinted that she should clean herself and go for a walk, deceased told her to mind her own business. On Christmas morning Mrs. Crook cooked them a turkey and plum pudding with brandy sauce. They had the best of everything to eat. After Christmas morning Mrs. Crook did not see her again. On Sunday Mr. Lynch called her and said, "Carrie is dead."—Henry Crook was the first to go into the bedroom. He found deceased on her back with her legs out on the floor. She had nothing whatever on except a sort of dirty bodice in rags around her shoulders. All Lynch said to him was, "She looks a very pleasant corpse, doesn't she?" and told him to say nothing bad of deceased.—P.C. Chudley said the few things in the room were rotten and dirty. The old

mattress on which the body was found was broken all to pieces and was dirty and wet. There was grease all over the floor, and the stench was awful. He could not stop there long. Lynch's bedroom was also in a very bad state. There was no bedding beyond dirty ragged clothes.—Ann Cann asserted that when she reproached Lynch about the dirty state of the house, he said he was master there and he should clean it when he liked.—Jane Warne, who did what cleaning was done, said deceased never permitted her to enter her bedroom.—Dr. Steele found deceased had suffered from extensive disease of the liver and weakness of the heart. Death was due to natural causes.

Mr. J. H. Pope, sanitary inspector and owner of the house, was summoned on the jury, but the coroner said he had better not serve, as he was interested in the case. Mr. Pope was called as a witness. He had known deceased fifty years. Her father was a builder at Tor. Lynch had occupied the house four years.—The Coroner: You knew the dirty condition it was in?—No, I did not. Twelve months ago my attention was called to it, and I spoke to Dr. Steele about getting the woman removed. The first I heard of the dirty condition of the house was on Monday. A year ago the rooms downstairs were put in order.—Was it not your duty as sanitary inspector to find out a dirty house like this?—Oh, no. I must not go into people's houses without notice. He produced a letter from Dr. Karkeek, medical officer of health, requesting him to see the house and report. He received that yesterday.—The Coroner: It strikes one as rather curious that you as landlord, going to the house for the rent, should not have suspected the dirty condition of the place.—Mr. Pope: Not at all. The house was only done up twelve months ago.—The Coroner: You as landlord didn't think it necessary to ask to be allowed to look over the house?—Mr. Pope: No, sir. You can't go into people's houses, and demand to go upstairs.—Mrs. Crook said three months ago, as Mr. Pope was leaving the house, she called his attention to the filthy state it was in, and told him it ought not to be allowed to remain so bad. Other neighbours had also spoken to him about it.—Mr. Pope: That is wrong. My attention was called to the dirtiness of Miss Dyer, and she seemed all right. I must not listen to all people's tales. I have always seen a lot of bottles there, supplied by Mrs. Crook, and dirty glasses.—Mrs. Crook said she had supplied no beer to the house for twelve months.—The Coroner supposed something would now be done to the house.—Mr. Pope said he had given instructions for the bedding to be destroyed and the place thoroughly cleaned. Both beds were in a beastly state.—In reply to the coroner, he said he did not consider Lynch fit to live there alone. He would report the matter to the proper authorities. Lynch had an income of £150 a year, besides other money received from his brother.—The Coroner, summing up, said a dangerous nuisance had existed right in the middle of St. Marychurch. It seemed to have been unknown to the landlord and sanitary inspector, but he hoped that now it would be remedied.—The jury returned a verdict of "Death from natural causes."

THE INFLUENCE OF SURROUNDINGS.

By MR. T. F. STRUTT, Assoc. San. Inst., Mem. Soc. Française d'Hygiène, Sanitary Inspector Strand District, read at Carpenters' Hall, on December 5, at the Sanitary Inspectors' Meeting.

No one is better acquainted with the influence of surroundings on the health of the people than yourselves, who are daily engaged in counteracting those conditions which, existing in our surroundings, tend to depreciate the physical condition of man. In an address of this description the difficulty is to say something

new, and this I feel unable to do, or to bring to your notice any matter with which you are unacquainted. I will, therefore, content myself by saying a few words on the essentials to health and the surroundings which tend to influence those essentials for good or evil, and which have a direct bearing on our physical condition.

The human body is a wonderful piece of machinery, perfect in all its parts, and when nothing interferes with the complete action of all its functions, or when all parts are working harmoniously together, it is said to be in perfect health.

Health to the body is what reason is to the mind, it is the perfection and enjoyment of its best faculties and powers, and it may be observed that these two frequently depend on and afford mutual support to each other; therefore, besides influences bearing on our physical condition, life and health are acted on by forces which govern the mind. Man, then, is the recipient of numerous external influences which, acting on his body and his spirit, either tend to raise or lower him to affect the tone of his moral life, and add to or diminish the physical enjoyment of the health of the body. And as we are interested more in the study of physical conditions I will say no more on the influences which act on the mind; after all, it is a secondary matter with us, for one cannot conceive a healthy mind in an unhealthy body.

To the nature of the houses in which people live we can hardly attribute too much importance, for of all the influences at work none have more hold on our countrymen than those which obtain at home, and to the healthiness of the home, both morally and physically, must we look for the future well-being of the people. It is, then, of the utmost importance that our dwellings shall be such as will secure to man those comforts which tend to promote healthful rest after the labours of the day are ended.

The common conditions of bodily health are influenced by the atmosphere in which we live, the food we eat, the water we drink, and the dress we wear.

To preserve health, be prepared to ward off disease; and, to accomplish this, man must be brought to understand his sanitary surroundings, to act in accordance with the laws of nature, and to keep his person and habitation clean; by laws of health we mean those natural laws or conditions which experience teaches us it is impossible to violate or modify without incurring suffering.

He must be taught that specific diseases are like specific forms of vegetable and animal life, they can only be produced by pre-existing germs, and these germs or seeds are always more or less present in the air, ready to spring into activity whenever suitable material is presented for their development. Professor Tyndall, by his beautiful experiments, proved that the air is alive with the germs of putrefaction, hence in sanitary practice we aim at the prevention of putrefaction of animal and vegetable matters going on in the midst of human habitations, for experience in the world at all ages goes to show that much preventable disease originates in the putrefaction of those matters.

Our late and revered President, whose loss we so much deplore, said in an address, at Newcastle-on-Tyne, to the members of the Sanitary Institute: "If by some magic spell England could wake up to-morrow clean, she would wake up pure in spirit and godly in the comprehension of goodness. Cleanliness covers the whole field of sanitary labour, it is the beginning and the end; practised in its entirety it would banish all disease from the world." This statement is putting the whole subject into a nutshell, for health depends upon cleanliness, disease upon dirt and filth.

Our dwellings greatly influence the atmosphere in which we live, and according to the degree of cleanliness in which they are kept will depend the comfort of their inmates.

The first question one naturally asks is: What are

the conditions to be observed if the inhabitants are to enjoy good health? First, the house must stand on a healthy site, for undoubtedly health is affected by the soil on which the house stands. The exhalations arising from damp and undrained soil constitutes a poison which produces in the human subject fevers of the intermittent or ague type, and houses built upon such soil are conducive to phthisis. Dr. Buchanan, in his report to the Privy Council in 1866, demonstrated the direct relationship of mortality from phthisis to the height of ground or subsoil water; he found during his investigation into the effects of sanitary improvement in towns that where the sewerage of districts had led to the lowering of the subsoil water, the mortality from phthisis decreased from forty to fifty per cent.; this was specially noted in the towns of Salisbury, Ely and Rugby.

The air in the ground is also an important item, as this is by no means fixed, and is influenced by the action of the sun, and the rise and fall of the subsoil water; how necessary, therefore, that the surroundings of the intended dwelling be thoroughly examined, for if the soil be damp and the house occupied the warmth draws air foul and damp from the soil beneath fully charged with all the conditions appertaining to ill-health. The house must be such position that the air may circulate freely around it, and its aspect as regards the sun is important. It is always desirable that the rooms to be occupied should be situated east, south and west, so as to admit as much sunlight as possible; the windows, therefore, should be of adequate size, and so placed that light is introduced into every part of the room, and if this is effected the circulation of air through the rooms can easily be obtained.

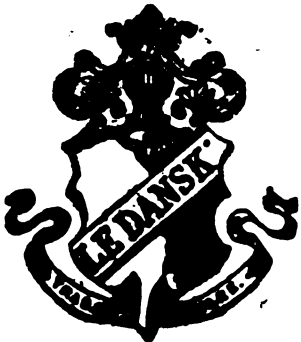
The value of light as conducive to health was fully appreciated by the ancients, and in order to obtain the fullest advantages of the light and heat of the sun, terraces were built on the tops of their houses called "solaria," where they took what was called their solar bath. There is an Italian proverb which says: "Where light is not permitted to enter the physician will have to go." And of this subject Dr. Forbes Winslow, in his work on the *Influence of Light*, says: "The exclusion from the sun produces the sickly, flabby, pale, anæmic condition of the face often seen among those not freely exposed to light and air. The absence of these essential elements of health deteriorates by materially altering the physical composition of the blood, thus seriously prostrating the vital strength, enfeebling the nervous energy, and ultimately inducing organic changes in the structure of the heart, brain and muscular tissue."

A good supply of water to every dwelling is absolutely necessary, and on the purity of this much will depend; the supply should not be limited, or uncleanness may be the result. Dr. Guthrie says of water: "The circulation of this fluid is to the world what that of the blood is to the body, or grace to the soul. It is its life; withdraw it and all that lives would expire—forests, fields, beasts, man himself would die. This world would become one vast grave; for water constitutes as much the life as the beauty of the landscape; and it is true, both in a spiritual and in an earthly sense, that the world lives because heaven weeps over it."

The conditions most conducive to good health are rather found in the country than in town, and it may be stated that health is more easily preserved in the country, where the air circulates freely round the house, and, given the pure water, good food, and proper clothing, man should (accidents excepted) live out his natural term of existence. God made the country but man made the town, and truly man has suffered for his lack of wisdom in planning the town. This London of ours has afforded numerous instances of suffering, and is still suffering, for the ignorance of its builders.

(To be continued.)

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Food and Sanitation.

SATURDAY, JANUARY 16TH, 1897.

PROF. THORPE ON SOMERSET HOUSE STANDARDS.

PROF. THORPE, the principal of the Government Laboratory at Somerset House, speaking at the annual dinner of the Society of Public Analysts, on January 13, made a statement of much importance to our readers—more especially to those who suffer the mortification of having milk adulteration prosecutions dismissed because so many magistrates make the mistake of regarding Somerset House as an authority having the power to fix a milk standard. We have always contended

that the dictum of Somerset House upon what should be regarded as pure milk was only an opinion, and a worthless one at that. Up to the present, the department has, however, apparently to pamper its vanity, fostered the delusion that it is the final word upon what is or is not adulteration. The principal of the Government Laboratory now explicitly states that neither he nor his department have any legal power to fix any standards. The admission comes tardily, and is not invested with that vagueness usually found in statements emanating from Somerset House. If Somerset House has no standards, we trust we shall no longer see dishonesty encouraged by any more of its untrue assertions that average milk can contain less than 2.75 per cent. of fat, and still be genuine! Our readers should bear this statement in mind when some of the Somerset House curiosities in certificates are placed before magistrates.

BACTERIA AND BUTTER.

A WRITER in the *Contemporary Review*, Mr. Clarke Nuttall, describes a most interesting example of the importance of science to industry. This is no other than the application of bacteriology to the production of good butter. This may seem startling at first blush. This new science has hitherto rather scared us from our food products than endeavoured to make them more palatable. It has seen typhoid in oysters and all manner of microbes in our milk. It is true, bacteriology does not invent (as some people seem to think) its bacilli; it merely discovers them. But the man in the street is apt to think that this is one of the cases in which ignorance is bliss. It is quite a different matter, however, when the bacteriologist brings obvious profit in his train, as the late M. Pasteur did, for example, in his researches as to fermentation and preservation of wines, or, as Dr. Weigmann, of Kiel, has now done for the production of butter of admirable keeping quality and excellent flavour. The Danish competitors of the Irish farmer and dairyman, always alert for any discovery which will improve their produce, have already seized on the new process, and may be trusted to make the most of it. The principles of the new system are easy of comprehension. Butter, as is well known, is not usually made from fresh cream, one obvious reason being that, though such a product has a delicate aroma, its flavour would be generally considered insipid, and, most important of all, it would not keep well. The article manufactured from soured cream has a pronounced flavour, and its keeping qualities are very considerable, and thus, for purposes of export—and, indeed, for the general requirements of trade—it is practically the only kind of value. Farmers usually let the cream go sour of itself without any artificial process, by churning at one time what has been collected during the previous week. Now, it has long been known to bacteriologists that "souring," like other fermentations, is the result of the presence of certain bacteria or minute living organisms, which act on the sugar of the milk and produce what are known as "lactic ferments." Most of those invisible organisms, it is generally held, come from the air, but others, in the case in question, no doubt find their way into the cream from the udders of the cows, or from the sheds in which the beasts are kept. At any rate, it is certain that the bacilli in the cream when it is soured are exceedingly numerous, and, what is of importance, of different kinds. Some of them, even when they are otherwise innocuous, affect the flavour of the butter adversely, while others, it has been found, impart to it the aromatic flavour characteristic of the best

dairy butter. Now, the work of Dr. Weigmann, of Kiel, has been to isolate and differentiate the bacteria found in sour cream with a view to eliminating the noxious element. He has succeeded in this as the result of a long series of most careful and interesting experiments. He first of all discovered the germs that turned the cream sour. These he "cultivated," and added the acidifying product to cream which has previously been deprived of all germs, and churned the mixture into butter. The result was, as he had anticipated, quite pure, but the product was almost flavourless. Dr. Weigmann now looked about for the specific organisms that produced the flavour and aroma of the article, and, having discovered them, repeated the former process with the addition of the new culture. His butter now had a splendid flavour in addition to its former good qualities, but it was still liable to become rancid too quickly for trade purposes. It did not, in fact, keep well. It was obvious from this that some essential germs were still missing, but even these Dr. Weigmann succeeded in identifying and isolating, and then his task was accomplished. He could now obtain at will, from sterilised cream, soured with the due proportion of the different bacteria, a butter of the primest quality and of admirable keeping qualities. His next step was to make the "cultures"—as the several bacteria growths are called—available in commerce. At first they were in liquid form, but now a dry preparation is available for the purpose, and every farmer, in Denmark at least, is likely soon to become his own bacteriologist, so far, at least, as the production of good butter is concerned. Briefly, the new process of butter-making may be described as follows:—First, some skimmed milk is sterilised and then soured by the addition of the dry bacteria mixture; then the cream is sterilised; next, the souring mixture (which takes almost a day in preparation) is added, and finally the whole is churned. The practical importance of Dr. Weigmann's discovery should be very considerable, as has already been recognised in Denmark, and, no doubt before long it will be given a trial nearer home.—*Freeman's Journal*.

WHAT A PETROLEUM FURNACE MIGHT DO.

M. C. DUSAULX, of Suresnes, has invented a furnace designed so that two eccentric petroleum flames, one within the other, shall impinge upon a horizontal metal plate, which is thereby raised to incandescence, and upon which soot deposits. The heat of this combined flame, by conduction of the metal plate and by reason of the contiguity of a water receptacle, generates steam, which, in contact with the incandescent plate and the soot thereon, is decomposed into its elements. The latter instantly recombine, forming an intensely hot flame. The outer petroleum flame is fed with oil by means of a cane or rattan dipping into an oil receptacle and passing through an annular tube. The inner flame is fed from an upper and exterior oil tank by means of a tube passing upwards within the annular tube and having a regulating cock. Its upper or burner end is pointed, and is higher than the outer burner. The latter is surrounded by a truncated cone to induce a draught of air thereto. The inner flame is surrounded by an inverted truncated cone for the same reason, having side openings to allow of the entry of steam from a small annular water-chamber outside.

Monsieur Dusaulx has not publicly avowed it, but it is understood that if Mr. J. D. Rockefeller, Professor James Dewar, Sir Frederick Abel, and Mr. Redwood will submit themselves for experimental purposes, the inventor will put them into the furnace forthwith. We trust that should the proposal be publicly made, these ornaments of finance and science will not, like another Hannibal, pledge themselves to a sacrifice on the altar of their country. It would be a dull England without

them, for where could we see semi-filtered sewage and drainage aliasing itself as water in London, or murderous American refuse oils exacting their one bit of human roast meat per day, if these gentlemen became sacrificial pioneers? Even every admirer of Cain would curse Abel's immolation, and what would the fire reporters do for copy if the murderous American 73 degrees F. flash-point refuse oil were to have its sale prohibited? Imagination, as Carlyle said, "choked in mephitic air, recoils upon itself." The loss would be too terrible. Roast us alive, burn down our houses, take as toll one roast human per day, but do not, oh! Monsieur C. Dusaulx, of Suresnes, deprive us of Professors Abel and Dewar and Mr. Redwood. You know their worth—and so do we.

A SINGULAR POINT IN MILK ADULTERATION.

AT Paignton Petty Sessions, on December 30, A. G. Rabbich, of the Paignton West-end Dairy, and Thomas Berry, a milk-seller, of Totnes-road, were charged with selling adulterated milk. Mr. F. J. Carter defended. At the last District Council meeting Mr. Crathorn, the sanitary inspector, submitted the analyst's report on eight samples of milk he had sent up. Nos. 1 and 2 were said to be adulterated with 23 and 25 per cent. of water respectively; Nos. 3 to 8 were genuine. The Council declined to ask the names to which these numbers referred, and ordered the inspector to prosecute Nos. 1 and 2. Mr. Carter now called for the authority to prosecute, and the resolution with the numbers in it being produced, he said it was no authority at all. The Bench upheld this view, and said the inspector could take out a fresh summons. Mr. Carter asked that the summons be dismissed, but the Bench declined to do that or to give costs. It was mentioned that proceedings must be commenced within 28 days, and that the samples were taken on the 10th, and that there would be time for the Council to give a fresh authority at their meeting next Monday. Mr. Carter said he had witnesses present, and a complete answer to the cases on their merits.

ADULTERATED DRUGS IN MASSACHUSETTS.

THE 27th annual report of the Massachusetts State Board of Health, which has lately come from the Press, states that the adulteration of drugs appears to be increasing. In the course of the year 1895 the Government chemists analysed 544 samples of drugs, and found only 212 to be up to the standard, the percentage adulterated being 61. In the last dozen years the average percentage, even including 1895, has been only 35, and five years ago it was as low as 17.

Attention has already been called, in previous reports, to the fact that the percentage given in the foregoing summary does not represent, in any degree, the actual ratio of adulteration existing in food products and in drugs, for several reasons; chiefly on account of the fact that the experience of the Board enables it, first, to exercise a careful selection of such articles, mainly, as are liable to adulteration; secondly, to obtain such articles in those seasons of the year when their adulteration is most common; and, third, to pay special attention to new forms of adulteration which are constantly appearing as fast as the fraud and ingenuity of the professional adulterator present them to the public.

The principal drugs found to be adulterated are as follows: Ether, distilled water, extract of liquorice, compound spirits of ether, spirits of nitrous ether (all below standard, and more than half less than 50 per cent. of the required strength), the pharmacopœial wines and liquor, tincture of opium, officinal soap and mercuric ointment. Much greater care is necessary in the preparation of distilled water. Its use for preparing eye-lotions, for the solution of nitrate of silver and other salts, and many other purposes requiring pure water

calls for a carefully-made article, and yet it was commonly found on analysis to be nothing but the tap-water of the city or town supply, and in one instance it contained more impurities than the ordinary sewage. It is needless to say that a conviction and fine followed upon this sale.

There are dealers in 84 cities and towns to whom notices were sent on account of the detection of adulteration. Boston leads, with Holyoke second. The number of cases entered in court was 11, and in every instance, save two, conviction followed; the exceptions being due to the sudden departure of the defendants from the State. "Ruppert's Face Bleach" caused most of the trouble, and distilled water cases were next in rank.

Touching on the subject of food preservatives, the report states that borax and boracic acid were found in samples of clam juice and shredded codfish; salicylic acid was discovered in jams and preserves; a salt sold as "fish preservative" proved to be a mixture of common salt and borax, and "oyster preservative" proved to be a compound of salt and boracic acid. Samples of extract of vanilla contained 2.23 grains of vanillin per litre, and two others contained coumarin.

Spiritus Aetheris Nitrosi:—But very few samples showed even an approximation to the pharmacopoeial requirement in contents of ethyl nitrite. This drug cannot be properly kept unless in small, securely-sealed bottles, away from the light, and even so it loses its strength in the course of years. Apparently but little care is exercised by druggists to observe these necessary precautions.

A sample of "*unguentum zinci oxidi*" was found to be composed of 10.5 per cent. of oxide of zinc mixed with plain lard; whereas the Pharmacopoeia demands 20 per cent. of the zinc salt to be mixed with benzoated lard. Several samples of Mme. Ruppert's face bleach contained corrosive sublimate to the extent of about 27 grains to an 8-ounce bottle. "Poison" labels were used, as required by law; but on the bottom of the bottle, where they were fairly certain to escape the notice of the average buyer. "Perry's Freckle Lotion" contained 39 grains of corrosive sublimate to an 8-ounce bottle; a "Recamier Balm" consisted of zinc oxide suspended in water, with a trace of corrosive sublimate. "Excelsior Hair Tonic" was made chiefly of bay rum containing quinine. A sample of "Pulmonine" analysed showed 16 per cent. of alcohol by volume. A "Coca-Kola" preparation contained caffeine, cocaine, sugar, and tartaric acid; "Hunyadi Granules" were found to consist of tartaric acid and bicarbonate of soda, and "Vichi Granules" were of the same composition.

A PUBLIC HEALTH ACT (BYE-LAWS) PROSECUTION.

At North London, on December 31, Mr. J. H. Stone, builder, of Overstone-road, Hammersmith, was summoned before Mr. Mead, at the instance of the Islington Vestry, for breaches of the bye-laws made under the Public Health Act.—Mr. Bramall prosecuted for the Vestry; Mr. Morton Smith defended.—For the Vestry it was stated that the defendant had done some sanitary work at a house in Pyrland-road, Canonbury, without giving notice as required by the bye-laws of the London County Council. The work done appeared to be the putting in of a new w.c. pan, a ventilating shaft, and altering a soil pipe without putting in a brass thimble to allow for expansion and contraction in the metal.—John Metcalf, the sanitary inspector, said that the work was really completed in September last, and no complaint was made by the occupier or owner. Asked how he came to visit the premises, the officer said that he was directed to go to the premises by the medical officer of health, but he could not say how the medical officer got the information.—Mr. Morton Smith, in defence, said that it was for the

Magistrate to decide whether the bye-laws could apply. If they did, then a householder could not make the most simple, and probably a most necessary sanitary improvement, without going through the form of giving notices to the Vestry and having elaborate inspections made.—Mr. Mead held that the work was clearly within the bye-laws. These bye-laws had been made no doubt with the concurrence of great sanitary engineers and had been sanctioned by the Local Government Board, so they came before him with considerable authority. The necessity for inspection was shown in this case, where an improper joint had been made. It was the duty of builders now to know the bye-laws, and any builder who did not know them was not fit for his business. He ordered the defendant to pay fines and costs amounting to £3 6s.

THE FOOD AND DRUGS ACT IN WOLVERHAMPTON.

THE annual report of the Inspector of Food and Drugs for the borough of Wolverhampton (Mr. G. F. Allwood), shows that during the past local year 148 samples of food and drugs were procured and submitted to analysis, being at the rate of about one per 550 of the population. Twenty-three different articles were purchased, these including whisky, brandy, gin, rum, butter, pepper, allspice, cheese, coffee, milk, ginger, oatmeal, quinine wine, ipecacuanha wine, and nine other sorts of drugs. Analytical results proved 34 adulterations, or 23 per cent. Written cautions were given in eight instances for slight breaches of the law, and 26 defaulters proceeded against. The total sum imposed in fines and costs amounted to £155 10s. 6d. contributed mainly by convictions for infractions of the Margarine Act. There was one fine of £15; one of £10; fourteen of £5; one of £3; and six of £2; the remainder made up of smaller fines. This total of £155 10s. 6d., for a single year's work under the Acts, forms, we should imagine, a record of penalties for any one district at all approximating to the size of Wolverhampton. This energetic crusade against margarine as butter vendors has, it is believed, been attended with excellent results. One satisfactory feature of the year's proceedings was a successful prosecution of wholesale chemists for breaches of the Warranty Clause of the 1875 Act.

Fines and costs under the Margarine Act amounted to £87 1s. 6d., so, on the whole, Wolverhampton can be congratulated on possessing able and energetic officials.

ASTON MANOR SANITARY DEPARTMENT.

FROM the annual report presented by Mr. B. Bolt, sanitary inspector to the Aston Manor Urban District Council, it appears that during last year 155 samples of milk were taken, and of these 9 proved to have been adulterated, 9 had been deprived of a proportion of cream, and 7 were of poor quality. In 8 cases the offenders were fined. Thirteen samples of so-called butter out of 59 proved to be margarine, and in 12 cases the vendors were convicted and fined. In the remaining case a warranty was pleaded, and the wholesaler was prosecuted and fined. A total of 1,008 cases of infectious disease were reported during the twelve months, these being classified as under: Diphtheria, 204; membranous croup, 18; erysipelas, 78; scarlet fever, 596; typhoid fever, 82; puerperal fever, 10; other diseases, 20.

MR. THOMAS KINNIBEAR, Sanitary Inspector of Dundee, has had conferred on him the Fellowship of the Society of Incorporated Sanitary Engineers of Great Britain and Ireland after examination, and he is now entitled to add the letters F.I.S.E. after his name.

COCOA.

At Ilminster, on December 30, James Haycraft, of North-street, Ilminster, was summoned for selling adulterated cocoa on November 18.—P.C. Pollard spoke to asking for 1lb. of cocoa in defendant's shop. He was served by Mrs. Haycraft, who asked him 5d. for the cocoa. He explained the object of his visit, and offered Mrs. Haycraft a portion of the pound, but she refused it. She afterwards said she sold the constable granulated cocoa in the same condition as she received it. There was a placard in the shop marked "Fry's Pure Cocoa."—Superintendent Rawlings produced the public analyst's certificate, which showed the cocoa in question contained 35 per cent. of starch and sugar.—Defendant said it was his practice to label this quality cocoa when it was sold with a statement that it was not pure cocoa, but on this occasion this was omitted.—The Bench treated the offence as a mistake on the part of the defendant, and fined him the costs, 4s. 6d. only.

At Cheltenham, Joseph Oakey, shopkeeper, of St. George's-road, was summoned for selling adulterated cocoa.—P.S. Dobbs called at the shop on December 9, and purchased, for 3d., what was sold as half-a-pound of cocoa. He sent the sample to Mr. Geo. Embrey, the county analyst, of Gloucester, whose certificate was to the following effect:—"The sample is adulterated with sugar to the extent of at least 33 per cent., and with starch to the extent of at least 25 per cent., the amount of cocoa being 42 per cent." Dobbs added that the defendant (who was not present when the cocoa was sold) came to the police station the same night and explained that, through an oversight, a label, stating that the sample contained other ingredients than cocoa, was omitted from the packet.—Defendant now urged the same defence, but the Bench fined him £2 with 18s. 3d. costs.

MEAT.

At Clerkenwell, on January 11, D. Buckingham, described as a butcher and marine-store dealer, etc., of Albert-road, Luton, was summoned before Mr. Bros for depositing a carcase of mutton at 97, Charterhouse-street, on October 30, intended for the food of man, the same being diseased and unfit for human consumption.—Mr. Hall, prosecuting for the Holborn Board of Works, contended that the animal, which had died a natural death, had been sold to the defendant for boiling down in his business as a marine-store dealer. The meat was seized by Inspector Billing, and was so bad as to be obvious to the casual observer.—A local police officer said the defendant told him he sent it to London thinking it was "good enough to pass."—The defendant said he was told the animal was properly slaughtered, and he believed it to be good.—Mr. Bros said London was not the place for bad meat. He imposed a fine of £20, or two months' imprisonment.

HALIFAX CHAMBER OF COMMERCE AND THE INSPECTION OF MEAT.

APROPOS of a circular on Meat Inspection from the London Chamber, Mr. Skelton, at a recent meeting, moved that the Council support uniform meat inspection. There were now some towns, he said, where there was very little supervision whatever—to their great advantage in the market. In Halifax they had a very strict supervision at present, and also in the surrounding district; and it had become a great hardship to the butchers and farmers in this district. Butchers were, of course, anxious to have nothing but the best, but they did not want anything to be confiscated that could be kept for food.—Mr. J. Bairstow seconded the motion.—Mr. Scarborough said that he believed that the County Council were more drastic than the County

Borough. He was afraid that before the advent of the new inspector there had been some lethargy in this matter.—The proposition was carried.

A PLEA FOR FAIR TREATMENT OF MEDICAL OFFICERS OF HEALTH AND SANITARY INSPECTORS.

A CORRESPONDENT of the *Daily Chronicle* on January 4 wrote:—

SIR,—In your issue of Saturday, Mr. Sherwell calls attention to the necessity for collecting reliable information as to the weak points of our administrative machinery. As far as the provinces are concerned, in my opinion, and I speak from experience as a late Poor-law medical officer, subsequently an urban medical officer of health, and now a county medical officer of Health—the first step necessary is to give medical officers of health and sanitary inspectors the same security of tenure of office as Poor-law medical officers. At the present time, when an officer has to be reappointed every year or two, it is absurd to expect him to do his duty without fear or favour. The Scotch and the London Public Health Acts recognise this, and before a Scotch or Metropolitan sanitary officer can be removed from office the consent of the Local Government Board must be obtained. The necessity for the change I advocate is so apparent that I need not, nor would you be willing to find space for all the instances I could give of men being "not re-elected" at the end of their terms of office simply because they have fearlessly done their duty, and have thereby made themselves objectionable to persons exercising influence with the members of the boards. Under these circumstances, we must not be surprised if their successors place their bread and cheese before the public good. Let me ask your readers to consider what the effect would be if the inspectors of factories were appointed by the district councils under the same conditions as provincial medical officers of health and inspectors of nuisances.—I enclose my card, and beg to subscribe myself,
M.D.

This is a subject we have often written about, and if our powerful daily papers would devote some attention to it the evils complained of would soon be removed, and the public substantially benefited.

BUTTER.

At Dronfield Petty Sessions, on December 28, Kate Morgan, grocer, Sothall, Beighton, was summoned by Col. Shortt, Inspector of Weights and Measures, for unlawfully selling to Robert Tomlinson a substance for butter which contained 90 per cent. of fat foreign to butter, on November 18, at Beighton. Col. Shortt called evidence to prove that the butter was bought from Kate Morgan, who had purchased it in Sheffield Market from a man named Taylor, who had a stall. He guaranteed it to her as butter, but she obtained no warranty and no invoice. The price of the butter was 7d. the half pound. He (the Colonel) had received a report from the analyst to say that the substance contained 90 per cent. of fat foreign to butter. He thought the woman acted in ignorance and had no intention to defraud.—The Magistrates took this view of the case, and imposed only a fine of 1s. 6d. and costs 10s. 6d.

MR. G. D. MACDOUGALD, city analyst, Dundee, has submitted a report to Dundee Town Council referring to the examinations of milk for the past quarter. Altogether 40 samples were taken, and of these nine were found to be adulterated with water, the percentage varying from two to ten. Several samples of butter, etc., were taken, and these were found to be genuine.

MILK.

At Derby, on January 2, Edward Morley, of 2, Bailey-street; Sarah Turner, of 1, Provident-street; Rachel Barnett, of 67, Silver Hill-road; and Frederick Lewis, of 38, Darby-street, four small shopkeepers, were all summoned for selling milk which had been adulterated.—The cases were proved by Mr. Wilkinson, the Corporation Inspector, and they were conducted by the Town Clerk (Mr. H. F. Gadsby).—In the cases of Morley and Lewis there was 8 per cent. of added water, and in the cases of Turner and Barnett there was an addition of water to the extent of 5 per cent.—Mr. Bendle W. Moore, who defended, denied on behalf of the defendants that they had adulterated the milk themselves, but sold it just as it was delivered to them.—Mr. Williamson, speaking from the Bench, said his own experience taught him that 5 per cent. was such a small one that it was difficult for anyone to prove adulteration.—The members of the Corporation present on the Bench did not adjudicate in the matter, and Mr. Bailey therefore became spokesman for the others. He said they had decided by a majority, of which he was not one, to dismiss the case on the payment by the defendants of the costs—15s. 6d. in each case. The reason for dismissing the cases, Mr. Bailey explained, was that the adulteration was so trifling.

At Dundee, on January 4, a dairykeeper pleaded guilty to selling, by the hands of her servant, milk adulterated with water to the extent of 16·35 per cent. Mr. A. Buchanan stated on accused's behalf that several of her cows had not been fit for milking purposes, and that to make up her supply she had bought milk from other dairies. The law, however, held her responsible in the matter. Hon. Sheriff-Substitute Ogilvie imposed a nominal penalty of 10s., with the alternative of three days' imprisonment.

At Weymouth, on Jan. 9, Charles and Francis Stone, of Markham Dairy, Wyke Regis, were mulcted in penalties amounting to £3 8s. 6d. for selling adulterated milk, the analysis showing 35 per cent. of added water.

At Sutton, the Sanitary Committee have authorised proceedings against a purveyor of milk, on account of samples taken by the Inspector and found to contain 33 and 20 per cent. respectively of added water.

At Greenock, on Jan. 8, Alice Cairns was convicted for selling in her shop at Shaw-street, milk which was not up to the standard required by the Sale of Food and Drugs Act. Accused said she sold the milk as received; she did not skim the milk or add skim milk to it. A fine of £2 was imposed. A similar penalty was inflicted upon William Paul, huckster and carter, 15, Arthur-street, who was also charged with selling adulterated milk. The analyst's report showed that the milk in this case was still more deficient in fat. Accused said he was unaware of an adulteration, and neither he nor Mrs. Paul were in the shop that day.

At Portsmouth last week, Thomas Boulton, purveyor of milk, of 25, Beeston-road, Buckland, was summoned for selling adulterated milk.—The case had been adjourned in order that the Somerset House authority might make an analysis of the sample. This had been done; and the certificate disclosed that 28 per cent. of cream had been abstracted.—The Bench imposed a fine of £2 and the costs.—Emily Newman, of 51, Somers-road, Southsea, was summoned for selling milk from which 36 per cent. of cream had been abstracted.—The defendant, who keeps a confectioner's shop, explained that she did not sell more than a gallon of milk per day, which she purchased from a neighbour, and retailed over the counter. She promised not to sell milk for the future.—The case was dismissed on this understanding.

At Reading, on January 4, William Blake, of 395, Oxford-road, a dairyman, was summoned for selling

milk deficient of the proper percentage of cream, on December 17.—Mr. Millington, Deputy Town Clerk, prosecuted on behalf of the Corporation, and stated that in the milk purchased by Mr. Robertson there was only present 2·19 per cent. of fat. Although there was no absolute standard of purity laid down by the Act, the usually accepted standard was approximately 3 per cent. There was consequently in the present case a deficiency of more than a quarter of the requisite quantity of fat, viz., 27 per cent.—John Choules, assistant in the Borough Engineer's department, spoke to purchasing half-a-pint of new milk at defendant's establishment; and Mr. W. H. Robertson, sanitary inspector, proved the result of the analyst's examination.—The defendant, who is manager to the Elm Park Dairy, said he did not purchase the milk; it was simply left at his premises and he sold it in the ordinary way.—The Bench regarded the defendant as wholly responsible in the matter from a legal standpoint, and fined him £5, inclusive, or one month's imprisonment.

At Bristol, on January 11, George Watkins, a dairyman, of Melville House, Lower Easton, was summoned, under the Food and Drugs Act, for selling milk adulterated with 11 per cent. of water.—Mr. H. R. Wansbrough defended.—P.S. 3 A said that about 8 o'clock on the morning of December 15 he was in Pennywell-road in company with P.C. Rainey, when he saw a young man selling milk from house to house. Witness purchased a pint and a-half, and told the man that he intended submitting it for public analysis. He paid threepence for the milk, and the analyst's report showed that it contained 11 per cent. of added water.—Mr. Wansbrough, for the defence, said that the facts of the case were not disputed, but he should like to say that Mr. Watkins had carried on business for 40 years without having been before summoned. He denied, on behalf of his client, that he had any knowledge that the milk was adulterated.—A fine of 20s. and costs was imposed.

BEFORE the Leeds Stipendiary, on January 8, William Paley, farmer, Shadwell-lane, near Leeds, was charged with selling a gill of new milk on December 11, 1896, which was found by Mr. Fairley, city analyst, to contain 20 per cent. of added water. The defence was that the milk must have been adulterated prior to being sold to defendant. Fined £2, including costs. Inspector Walker proved the case.

At Coventry on January 7, William Wright, farmer, Tile-hill, was summoned by the Inspector of Nuisances for the adulteration of milk. Defendant pleaded not guilty. The Town Clerk prosecuted. The inspector purchased a sample of milk from defendant, and Dr. Bostock Hill certified that the milk was adulterated with 21 per cent. of added water. Defendant told the inspector that he had purchased the milk from another tradesman, and requested him to take a sample of his milk. The inspector had done so, and it was found to be genuine, but he subsequently took another sample, and that also was found to be genuine.—Defendant repeated to the Bench that he purchased the milk, but the Mayor told him he was the person responsible. He would be fined 20s. and 11s. 6d. costs, and the analyst's fee, 10s. 6d.

SPIRITS.

At Belper Petty Sessions, Octavius Parkin, of Mackeney, licensed victualler, was charged with selling adulterated whisky on November 25, and there was a second charge of selling adulterated rum on the same date.—The prosecutor was Captain Sandys, one of the County Council inspectors, under the Food and Drugs Act.—Mr. G. T. Terry, Belper, defended, and pleaded guilty, stating that the tester used by the defendant

was broken, and the water was added to the spirits by guess.—Fined 10s. in each case, or £3 including the costs.

At Eastbourne, on January 4, Richard Kenyon, of the Star Shades, Ocklynge-road, was summoned at the instance of the Corporation with selling whisky so adulterated with water as to reduce the spirit to 27 degrees under proof, or two degrees below the limit specified in the Act of Parliament.—Mr. H. W. Fovargue (Town Clerk) prosecuted, the defendant being represented by Mr. Leslie.—Walter Grant, Sanitary Inspector, stated that on December 2nd he called at the Star Shades, and at his request the defendant served him with half a pint of Scotch whisky, for which he paid 1s. 2d. This, when analysed by the Public Analyst, was found, according to the certificate given, to have been adulterated with added water to the extent mentioned in the summons.—The defendant, who gave evidence on his own behalf, stated that the whisky had been in a two-gallon stone jar, from which the Inspector was served, for about three weeks, and he suggested that the whisky, of which only a small quantity remained, had during that time evaporated. The brewers always broke the spirit down; he never did that. He did not touch it himself, nor did he test it; he did not know how to test it. He had held a license for seven years, during which period no complaint had been alleged against him.—The defendant was fined 10s. and costs.

At Upton-on-Severn Petty Sessions, F. Wilson, Upton-on-Severn, licensed victualler, was charged by Supt. Harrison with adulterating whisky. Supt. Harrison said he purchased a pint of whisky, which was 32 u.p. instead of 25 u.p. Defendant admitted the offence, and was fined 20s. and costs, 9s. 6d.

At the Chertsey Sessions, William Rhodes, a publican, of Egham, was summoned for selling whisky which had been adulterated with 16½ per cent. of added water, on December 4th.—Mr. Frederick Cliffe, a county inspector under the Food and Drugs Act, said he entered the defendant's house, the Nag's Head, Egham, on the day in question, where he saw the defendant's wife. He asked her to serve him with three-pennyworth of Scotch whisky, which she did. He then asked to be served with half-a-pint, and she proceeded to take the whisky from another bottle. He at once told her that he would not take that, but would have it from the bottle from which she had first served him. She then went and fetched the defendant without serving witness. When the defendant entered the bar witness told him that he had been served by his wife with three-pennyworth of whisky from a bottle, and that he wished half-a-pint from the same bottle. The defendant, however took up a second bottle, and proceeded to serve witness from it. Witness stopped him, and said it was no use serving him with whisky from that bottle, and that he was entitled to have whisky from the first bottle, and should insist upon having it. When witness said that the defendant served him from

the first bottle; but he had poured some from the second bottle into the measure. Witness refused to take that half-pint. After obtaining what he wanted, he sent part to the county analyst, who declared that there was 16½ per cent. of added water over what was allowable.—By the defendant: He did not go behind the bar at all. He simply went to the door of the parlour, and stood there.—The defendant said he had had to leave his house on one or two occasions recently in the hands of inexperienced persons, and it would have been easy for the spirits to have been tampered with. He was aware that he alone was responsible, but he wished to call the magistrate's attention to the fact that he had been in the house for seventeen years, and that samples of spirits which had been taken away had always been found correct. He (defendant) had had a long and honourable career in the army before he entered the trade. Thousands of pounds of public money had passed through his hands, and he had never made a mistake. He hoped that the magistrates would take all the circumstances into consideration, and impose as light a penalty as possible. He added that he had never done a dishonourable thing in his life.—The defendant then called Inspector Waters, who said he had known him since he first took the "Nag's Head." The defendant had always conducted his house in a most respectable way, and once when witness was struggling with a prisoner outside his house the defendant assisted him, and probably saved him from being injured for life. He believed that if the same thing happened again the defendant would assist him, or, in fact, any of the police.—Supt. Hackman, in reply to the Bench, said there was no record against the defendant.—The Chairman: The defendant will be fined £5; but the licence will not be endorsed.

POISON IN THE POTATO.

"THE French Minister of War and his specialist advisers have," says the *Newcastle Chronicle*, "made the startling discovery, or think they have, that the nutritious and indispensable potato may, and in certain circumstances does, become a death-trap. They declare that the 'eyes' resulting from the spontaneous germination of the tuber contain poison, and that this poison gives rise to grave indisposition, which in at least one case noticed in the army has terminated fatally. The potato being the chief dietary article of the French trooper, the Minister has issued instructions that the places in which the vegetable is stored shall be regularly visited and inspected, and that the 'eyes' shall be removed from those potatoes which have commenced to bud. According to the War Office authorities, the cases of inexplicable poisoning, as a rule trifling, but often serious, are due to the consumption of sprouted potatoes, or rather, of potato sprout. Are we to believe the statement? Or is it merely another proof of the truth of the judge's dictum that there are three classes of perverters of the truth—liars, d—liars, and experts?"

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DRUGS.

At Northop petty sessions, on Dec. 31, Edward Chambers, grocer, Houghton, was fined 18s. 9d., including costs, for supplying tincture of rhubarb with 25 per cent. of added water, and with saffron entirely wanting. The defendant said he purchased it at Mold, but had no guarantee as to its quality.

ENTERIC FEVER IN INDIA.

A CORRESPONDENT of the *Pall Mall Gazette* writes :—

"SIR,—I have been deeply interested in the pathetic letters of 'Patient' and 'A Mother' in your columns. The continued recurrence of and distressing mortality from typhoid fever among the officers of the British army in India are the more heart-breaking because they are due to the scandalous neglect and unpardonable parsimony of the Indian Government and of the British Army authorities. It is perfectly well known, and has been thoroughly established, that these outbreaks of typhoid are mainly water-borne (see Professor Hankin's reports), and that they may be effectually prevented in the British army, as they have been in the French, by a very simple means. At one time—and, indeed, until very recently—the soldiers and officers of the French army suffered from the ravages of enteric fever far more severely than even the British army in India; but M. de Freycinet, the late Minister of War, bears conclusive and repeated evidence that by the use of the Pasteur filter, which is bacteriologically perfect as a prophylactic, typhoid fever has practically been banished from the French army, both at home, and quite recently in Tonquin.

"It is well-known that the barrack filter in use in India has been condemned and its disuse ordered, and the use of the Pasteur filter has been recommended; but it is within my knowledge, and is in fact a matter of common knowledge, that although a considerable number of civil and military medical officers in India and in our stations at home and abroad have 'indented' for the Pasteur filter, they are still waiting for the supply, and for motives of so-called economy these epidemics and sporadic outbreaks continue in all their distressing consequences. This is a very false economy, to speak of no other motive, for the loss of so many promising officers and effective soldiers is very costly; the mere outlay involved in such a loss is from £100 to £500 for every man sacrificed. Is it too much to hope that Whitehall Yard and the India Office will not continue to be deaf to the voice of humanity, reason, and economy in this small and yet great matter?—I am, Sir, faithfully yours,

"January 8.

"I. M. S."

TINNED LOBSTERS.

THE occasional discolouration of tinned lobsters imported into this country has more than once threatened to have a very serious effect upon the trade, and efforts have in consequence been made from time to time to discover the exact cause. The Canadian Government, in continuation of the policy of their predecessors in exercising a paternal supervision over such industries, have commissioned Dr. Andrew McPhail, professor of pathology at the Lennoxville College, Quebec, to visit the United Kingdom with the object of completing certain experiments he has been making into the matter. The formation of sulphide of iron in the tins has to some extent been prevented by the use of gelatine in canning lobsters in Nova Scotian canneries; but, although more or less satisfactory from the exporters' point of view, it is said not to be regarded very favourably by the consumers. Professor McPhail's investigations are sure to be looked forward to with considerable interest.

THE INFLUENCE OF SURROUNDINGS.

(Continued from page 22.)

THE site was selected by the founders, we are told, on account of its splendid situation, being protected on the north by an eminence and a forest, on the south by the River Thames, and sheltered by the hills of Surrey and Kent, thus combining with other advantages all the natural defences that could be desired. The other advantages, looking from a sanitary point of view, were its facilities for cleansing and drainage being almost natural; but, alas! what a history from the beginning to the present day, of neglect of sanitary laws.

By glancing briefly at the construction of the thoroughfares and dwellings of old London, one can easily understand the influence of such surroundings on the health of the people, and how it was that diseases made such frequent and fearful visits and carried off its victims by thousands.

The streets were narrow, on which Sir William Davenant facetiously remarked: "They seemed to be contrived in the days of whelbarrows"; they were not laid out in straight lines, and situated according to the prevailing winds, which would be constantly blowing away foul emanations and introducing supplies of pure air, but were narrow, tortuous passages, with houses frequently projecting so that the upper floors almost touched; in fact, everything seemed to be done purposely to exclude the light and air so essential to health. The paving of the streets was not of such a nature as to prevent the soil beneath becoming contaminated, and when we consider the fact that the slops and house refuse of every description were thrown into the streets, there to lay until the rain washed into the soil, the emanation therefrom must have been painfully felt, especially when in pestiferous vapours it returned to the air as soon as a rise in temperature took place.

The river was the receptacle for all kinds of filth, the blood and offal of beasts slaughtered, together with the whole of the sewage and refuse of every description, were cast therein, and with all this pollution most of the drinking water was drawn from the Thames.

It was in 1549 that the Thames water was first conveyed into houses by means of an engine erected at Broken Wharf, to which succeeded the London Bridge waterworks. The New River was commenced in 1609, and brought to the New River head in 1613, but it does not appear that the supply was generally used until after the great plague and subsequent reconstruction of London after the fire.

Under the conditions before described London was suitable ground on which diseases flourished; in 1248 occurred a great pestilence, in 1456 upwards of 30,000 were killed by a plague which visited London, and about thirty years later another terrible visitation of disease, called the sweating sickness, and so through each succeeding decade we trace a history of pestilence, disease and death, fostered no doubt by the filthy habits of the people. And yet some sanitary measures were thought to be necessary, for we find several enactments were passed, but no one was appointed to enforce them, so we presume they were allowed to remain in abeyance, especially as the people then thought these visitations were especially sent from heaven.

The great Plague of London occurred in 1665, for which, by the filthy condition then existing, everything seemed prepared, and with surroundings as before described one cannot be surprised at the fearful destruction of human lives. The first two deaths are recorded as having occurred in Drury-lane, and the infection gradually spread until the whole town was desolated. It is estimated that 100,000 inhabitants of London perished, and the slaughter was only arrested by that fearful scavenger, the great Fire of London.

The following entries in the diaries of John Evelyn and Samuel Pepys, made at the time, are interesting, as showing that, although they thought these visitations were the act of God, there still existed in the minds of the people an idea that their habits and conditions were to a great extent to blame.

John Evelyn, on July 16, 1665, says: "There died of the plague in London this week 1,100, and in the week following above 2,000. Two houses were shut up in our parish."

On August 2, he says: "A solemn fast throughout England to deprecate God's displeasure against the and by pestilence and war. Our doctor preached that he means to obtain remission of punishment was not to repine at it, but humbly submit to it."

On August 10, 1665, Samuel Pepys entered in his diary: "By-and-by to the office where we sat all the morning; in great trouble to see the Bill (mortality) this week rise so high, to above 4,000 in all and 3,000 of the plague. Home, to draw over anew my will, which I had bound myself by oath to despatch by to-morrow night, the town growing so unhealthy that a man cannot depend upon living two days."

August 31: "Every day sadder and sadder news of its increase. In the city died this week 7,496, and of them 6,102 of the plague. But it is feared that the dead this week is near 10,000, partly from the poor that cannot be taken notice of through the greatness of their number, and partly from the Quakers and others that will not have any bell ring for them."

On Sept. 3rd, Mr. Pepys records his fear of infection from clothes and visit to the Vestry. He says:—" (Lord's Day) Up; and put on my coloured silk suit very fine, and my new periwig, bought a good while since, but durst not wear because the plague was in Westminster when I bought it; and it is a wonder what will be the fashion after the plague is done as to periwigs, for nobody will dare to buy any hair for fear of the infection, that it had been cut off the heads of people dead of the plague. My Lord Brouncker, Sir J. Minnes, and I up to the Vestry at the desire of the Justices of the Peace in order to the doing something for the keeping of the plague from growing, but Lord! to consider the madness of people of the town who will (because they are forbid) come in crowds along with the dead corpses to see them buried; but we agreed on some orders for the prevention thereof."

It is fortunate for us we live in happier times. We are free from those frightful epidemics of plague, sweating sickness, etc.; London is fast improving by the judicial application of sanitary laws, but much yet remains to be done; we have still left in London, aye, in the very heart of the town, near the spot where the first two deaths occurred of the great plague, a large area of narrow courts and alleys where the houses are built back to back, and from the narrowness of the courts one can shake hands with his neighbour of the opposite side; the rooms are dark and ill-ventilated; the sanitary arrangements are inside the houses, and the w.c.'s in dark vaults, the dust receptacle, often a shoot for something worse, is under the stairs, and, added to this, ill-ventilated apartments, poisoned by the exhalations of many human beings. Can it be wondered at that during the past 40 years a very high rate of mortality should prevail?

This particular nest of courts and alleys drew from the pen of Mr. John Bedford Leno a poem, so applicable, that I have ventured to insert it here:—

THE CROWDED COURT.

As I gazed from out my window on the crowded court below,
Where the sunshine seldom enters and the winds but seldom blow,
I beheld a flow'ret dying for the want of light and air,
And I said, "How fares it, brothers, with the human flow'rets there?"

By and by I saw a little hand stretched through a broken pane.

"I have brought thee," cried a little voice, "a cupful of God's rain";

But the rain alone would not suffice to raise its drooping stem,

And I thought of those who dwelt below and longed to succour them.

On the morrow ere the noontide, as I wandered down the court,

Through a brood of little children flushed alone by ruddy sport,

I drew a little girl aside and bade her tell to me

The names of those who dwelt within the cottage numbered three.

With little bright eyes sparkling through her flaxen unkempt hair,

She answered: "I will tell you; there are many living there!"

And swiftly with a nimble tongue she ran the whole list through;

I gave the child a penny, she curtsied and withdrew.

Let those on mercy's errands bent be never turned away,
There was fever raging all around those children in their play;

And in the little stifling room, outstretched upon the bed,

The sister hands to that I saw were lying cold and dead.

I called the flow'ret's friend to me and kissed her palid brow,

I longed to bear her far away where healthful breezes blow;

She told her tale of heartfelt grief as innocence can tell,
I never heard a tale so sad in sorrow told so well.

Toll, toll the bell; another and another has been slain,
No more shall I behold that hand stretched through the shattered pane;

They bear her to a sunny spot, where flowers bud and bloom—

The spot that should have been her home is chosen for her tomb!

But what of those yet left behind within that sunless court?

Shall they be left till death shall come and end their childish sport?

And she with flaxen, unkempt hair, with bright eyes all aglow—

Shall she, like others, perish in the crowded court below?

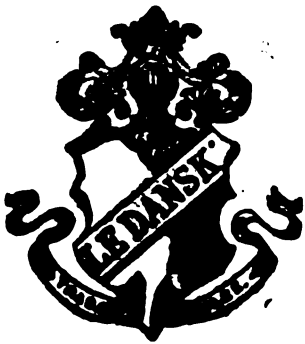
The influence of surroundings such as these indicated upon the people inhabiting those houses, and intimately associated with this state of things, and, indeed, inevitably depending upon it, are the impairment of health, poverty, dirt, and intemperance.

This particular area has at last been the subject of a representation to the London County Council under the Housing of the Working Classes Act, so, doubtless, before the end of another year, another improvement will be added to London.

Life in such dwellings is not lovely, and yet we have other areas in London full of squalid tenement houses fit only to be pulled down, and but for the support they receive one from the other, would fall down. Sir Edwin Chadwick, in speaking on this subject, said he always found in his local enquiries that the seats of epidemic disease (the result of bad sanitary surroundings) are the seats of irritation, of disturbance, and of crime. A population crowded into dilapidated houses, ill-drained and ill-ventilated, not only grow feeble and enervated and predisposed to infection, but by the same process became demoralised in body and mind.

(To be continued.)

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Food and Sanitation.

SATURDAY, JANUARY 23RD, 1897.

PURE (?) DANISH BUTTER.

THE Copenhagen *Smor Tidende* says:—"The shipments of butter from Denmark during the year 1896 were about six millions Danish pounds larger than in 1895, and may be estimated at nearly 123,000,000 pounds. The exact figures are not yet available. This considerable increase is the much more worth attention, as our imports of butter from Sweden and Finland have decreased nearly five million pounds, so that the production and exports of real Danish butter must have increased about eleven million pounds in 1896, compared with the preceding year."

"In ways that are dark and for tricks that are vain,
No one's a patch on the wily Dane."

He doesn't say a word about the amount of margarine

imported to make up for this decreased "five million pounds of Swedish and Finnish butter," nor how much of it has been mixed with pure butter and palmed off upon English buyers as such, to make the increased eleven million pounds exported. The wily Dane takes advantage of the fact that the Somerset House analysts admitted before a House of Commons' Committee the impossibility of detecting even 18 per cent. of margarine adulteration, and, such being the case, he makes hay whilst the sun of ignorance shines at Somerset House. In a truly touching, Pecksniffian spirit he is ceaseless in his posing as an apostle of purity in butter. If carefully-calculated roguery and unblushing effrontery ever merited success the Dane deserves it, but the curious thing about it all is that our wretched travesty of an agricultural department, cylept the Board of Agriculture, is about as impenetrably ignorant upon this as upon all other questions really affecting native agriculture. If anyone doubts it look at its wonderful achievements in the suppression of lard adulteration. FOUR YEARS ago we called its attention to the "Snowdrop" question, and it is only a few weeks ago it made up what does duty for it as a mind to formally prosecute. It wasted the time of the Houses of Parliament in a measure entitled the Fertilisers and Feeding Stuffs Act, and its secretary, Mr. T. H. Elliott, had the assurance to boast the other evening that the samples taken under the Act were actually 444 in the year 1895, and had increased to 615 in 1896. We have not swallowed thousands of pounds of public money, but if we had, such an abject record of incompetence as this to show we should seriously ask ourselves if we were not really too useless to exist. When we tackled the Adulteration Acts the samples taken were only 29,000 per annum, being an increase of only 1,600 over the previous year.

Our effect upon local authorities, etc., was to produce more than double this increase the following year, and so on year by year, until the last Local Government Board report shows 43,962 samples taken for analysis, and a yearly increase of 4,400 samples—a progress which speaks volumes as against the increase yearly of 1,600 when we began our work. The Government departments refused us information or assistance, which may explain our success, as of the first they had none to give, and the second, we suspect, would have left the Food and Drugs Acts where the Board of Agriculture has landed the Fertilisers and Feeding Stuffs Act—in a slough of despond. But, all the same, we are bound to say it is somewhat farcical for the Permanent Secretary of the Board of Agriculture to take credit for the fact that 615 samples were analysed in 1895. There has since been an increase, but we may as well inform the somnolent Board that it is due more to us than to the Board, who will, as usual, claim the credit of the improvement. Having thus shown what the Board has not done, and what it ought to do, we think it is time to ask if it will ever do anything to earn the public money now wasted on it. There is the American lard swindle as lively as ever. One prosecution does not affect that; there is the Danish butter swindle merrily going on, but the Board has not the sense to set a really expert analyst to work for a few months, and allocate a reasonable sum of money for the purpose of enabling sufficient data to be got together to thoroughly expose the Danish butter swindle. In point of fact the Board is an ignorant imposture, having neither the inclination nor the brains to be of any true service to English agriculture, and we doubt if it will be otherwise so long as it is virtually directed by persons whose agricultural knowledge might enable them to possibly differentiate a cow from a haystack, but would most likely stop at that.

Take another instance of the Board of Agriculture's incompetence. With regard to sheep scab the *Mark Lane Express*, January 11, says:—

"The continuance of this contagious disease amongst

our flocks is a standing disgrace. How is it that it still exists? Undoubtedly owing to the pernicious and half-hearted way in which measures are taken to combat it. The Board of Agriculture have at their command powers which, if strenuously enforced, would free the whole country of this vile and loathsome disease. The present Sheep Scab Order has been in operation since February 22, 1895, a period of almost two years, and with what result? We might, perhaps, safely say none."

A pretty sort of Board of Agriculture, indeed!

THE SURVEYOR'S VADE MECUM.

OUR contemporary, *The Surveyor*, is indispensable to all engaged in municipal work, because it is more accurate and instructive than any of the journals catering for municipal and county engineers. Its issue of January 8 is especially deserving of praise, the printing, paper, illustrations, and literary contents beating the record, even for our contemporary.

"Asphalte Pavements in America" (illustrated), "Legal Precedents of 1896 Relating to Municipal Engineering," "A Survey of the Legislation of 1896 Affecting Municipal Engineering," an article on an important improvement in the collection and removal of house refuse, giving illustrations and drawings, in sections, of a new anti-dust refuse van and ash-bin, and an exhaustive report on municipal works in progress and projected in the United Kingdom during 1897, are amongst *The Surveyor's* special features. The last compilation is exceedingly valuable, and must have been very difficult to make. "Law Notes," short articles, "Contracts Open," "Appointments Vacant," etc., show how thoroughly surveyors' interests are studied, and that our contemporary's established position as the first and recognised organ of surveyors, municipal and county engineers has been, if rapidly, very thoroughly earned.

It is not all "dryasdust," as a couple of lively articles by those well-known writers, G. Manville Fenn and W. L. Alden, show.

We thought German traders were tricky, but not so tricky as the following bit of information from *The Surveyor* discloses:—

"A wily trader in Germany recently tapped the supply wires of one of the electric lighting companies, and employed the force so gained, without payment, both for illuminating and motor-driving purposes. The company charged him with fraud, but the Courts held that electricity could not be stolen, as it was not a material object. Apparently, therefore, anybody who is able and unscrupulous enough to tap an electric conductor in Germany can do so with impunity. In England, fortunately, local authorities are in a better position, as the statute 45 and 46 Vic., cap. 56, sec. 23, lays down in somewhat terse terms that 'electricity is capable of being stolen.'"

But in our contemporary's compilation of the municipal works projected for 1897 by local authorities, it has achieved a success unprecedented in its own sphere. The coats of arms of no less than 88 places are reproduced, and the work intended to be done in many hundreds of places is clearly explained.

LEEDS AND THE SALE OF FOOD AND DRUGS ACTS.

THE report on analyses made for the City of Leeds during the quarter ending December 31, 1896, by Mr. T. Fairley, public analyst, states that the samples received have been:—Milk, 46; skim milk, 1; butter, 7; margarine, 1; flour, 2; lager beer, 1; total, 58. Three of

the samples of milk were diluted, two containing 20 and 13 per cent. of water respectively, and one had been deprived of 20 per cent. of its fat as compared with the lowest quality of natural milk. Ten milks were reported as of low quality. Four of the butters were adulterated with foreign fat, one consisted wholly of margarine, and the others contained 78, 70, and 59 per cent of foreign fat respectively. The other samples were genuine.

THE PUBLIC ANALYSTS' ANNUAL DINNER.

No fault could be found with the dinner (we suppose Spiers and Ponds know better than to afford any occasion for fault-finding), but some of the speeches on Wednesday, January 13, at the Criterion Restaurant would have been better were they, like the dinner—short courses and tit-bits.

Mr. Hudson E. Kearley, the Radical M.P., whose Parliamentary assistance the public analysts have done wisely in securing, very usefully pointed out the need of one comprehensive measure for the suppression of adulteration. He was sorry the Government could not agree to a central authority having the responsibility of enforcing the Acts, but he hoped such would yet be obtained. We hope the same. A voluntary Act is a farcical one, as witness the Board of Agriculture's Voluntary Fertilisers and Feeding Stuffs Act, the fact being that what is everybody's business is nobody's, and unless an Act be compulsory it is worth often less than the paper spoiled by its printing. One statement Mr. Kearley made is hopeful. If, he stated, the Government will not bring in a Bill, there are private Members who have one on the stocks and will bring it before the House of Commons.

Mr. Otto Hehner's speech was not uttered in a sarcastic tone, but—it may have been our fancy—we thought it quite in a Heine vein. He offered to Professor Thorpe and his colleagues, on behalf of the public analysts, the hand of friendship—a proceeding which brought to our minds the touching scene in the *Mysteries of Paris* of the "Dealers in Friendship." In a truly magnanimous spirit Mr. Hehner further placed at the disposal of the Somerset House laboratory workers the experience of all the public analysts. Well, all we can say is, Somerset House needs it, and, although we did not notice any precipitate acceptance of the offer, it would benefit the public if Somerset House had the assistance of analysts who understand adulteration and its detection. Mr. T. H. Elliott, Secretary to the Board of Agriculture, paid some very charming compliments to the new president of the society, Mr. Bernard Dyer, and mentioned that the last three months had seen a substantial increase in the samples taken under the Fertilisers and Feeding Stuffs Act, 673 being examined during one quarter as against 615 for a previous whole year. As the samples, however, to offer any real protection to the farmer from fraud, should be nearer 20,000 per year than these wretched few hundreds, we see no particular reason why Mr. Elliott should shake hands with himself, and think he is a vastly clever fellow. He will find no one who has the English farmer's interest at heart and knows what is damaging it who will agree with him.

The most important statement was that of Professor Thorpe, head of the Somerset House Laboratory, who expressed his entire agreement with the proposal of the late Select Committee on Adulteration for a special court of reference, and who explicitly stated that the Government Laboratory had no legal authority to fix any standards. His only desire, he said, was to work in perfect harmony with the public analysts. We do not doubt it, but, although he is its head, Professor Thorpe is not the department. We recognise that he is well-meaning, and have never held him responsible for the department's glaring blundering and incompetency.

We have a suspicion he is not the first estimable gentleman who is the victim of a department's evil traditions. At the time of his acceptance of the post, we said, "*Que de diable allait il faire dans cette galere?*" We have seen no reason to alter our surprise, although we must allow that, thanks to the thwackings we have so often given the department, it has been for some months on better behaviour.

Mr. Voelcker's speech we, unfortunately, could not hear; but Mr. Harcourt's consoled us by its graceful play of wit and charming phrasing.

Professor H. E. Armstrong, although not usually brimming over with the milk of human kindness towards public analysts' work, on this occasion extolled very highly their work in securing purity of milk, and emphatically condemned the use of preservatives such as formalin and boric acid in food. He considered they should be stamped upon as evils—a sentiment to which we say, Hear! hear! Mr. Alfred H. Allen, he said, had done immense service by his work on Commercial Organic Analysis, as had also the new president, Mr. Dyer, in researches in agricultural chemistry. Dr. Thomas Stevenson spoke of the work of the Society, after which Mr. C. E. Cassal again expressed the cordial feelings of the Society to Professor Thorpe, hoping that in the future the atmosphere surrounding Somerset House would have less lightning and clouds of disagreement. To Mr. Fletcher Moulton, Q.C., and Mr. Ricketts, the well-known solicitor, Mr. Cassal paid well-deserved tributes as masters of the analysis of analysts, but Mr. Cassal, if we understood him aright, made a mistake in his reference to FOOD AND SANITATION. Answering a jocular remark by Professor Armstrong that the public analysts ought to have a weekly paper, he made what we took to be a declaration that they had one in FOOD AND SANITATION, which he declared had done immense service in spreading knowledge on the adulteration question. Mr. Cassal's eulogy of our work, and the fearless and thorough way we have done it, lead us to forgive him, but it is right to state that we never had, nor have we ever had at any time any connection with the Public Analysts' Society, nor have we ever been their mouthpiece. If upon some questions our opinions happen to agree with theirs, well and good—we have done our utmost to support them, not for the sake of public analysts, but of the plundered public and ruined industries, whose dumbness on such questions first aroused our curiosity, and, when we saw their cause was just and pressing, our active militancy in their behalf. FOOD AND SANITATION is the organ of no society or party: it is just the vehicle by which its editor expresses his own opinions, and his only. Whether or not they please anyone else does not matter to him. He believes they are right and necessary, and he therefore utters them.

This personal explanation over, we may mention a very clever point made by Mr. Fletcher Moulton in his speech. He was, for the major part of his life, a firm believer, he said, in the benefits of adulteration, because on one occasion he accidentally took sufficient poison to kill him instantly. It did not, because the poison was discovered later to have been grossly adulterated. Another *apropos* story told by Mr. Fletcher Moulton was about Siemens in an electrical case. An examining counsel asked Siemens, in the interests of the gas companies, if there was not the danger of adulteration in electricity. Siemens quietly answered that he only remembered one form of adulterated electricity, viz., "greased lightning."

There were present, in addition to the speakers:—Prof. Thompson; Prof. Dunstan, F.R.S.; W. Hills, Pres. Pharm. Soc.; A. C. Tanqueray, Pres. Inst. Brewing; Dr. Messel; J. Innes Rogers; C. G. Groves, F.R.S.; W. T. Ricketts. Lord Winchelsea and Mr. Channing were absent through illness.

As there must be some who are curious about what public analysts eat, we append the

MENU.

Hors d'Œuvres à la Russe.
 Consommé Rivoli. Crème d'Artois.
 Filets de Turbot à l'Ambassade.
 Whitebait.
 Vol-au-Vent St. Georges.
 Terrine de Poulet à la Mascotte.
 Selle de Mouton.
 Choux de Bruxelles. Pommes au Beurre.
 Faisan Rôti.
 Salade.
 Céleri à la Moëlle.
 Pouding Saxon. Bombe Victoria.
 Dessert.

The various toasts were:—"The Queen," proposed by the President; "The Houses of Parliament," proposed by the President, and replied to by Hudson E. Kearley, Esq., M.P.; "The Various Government Departments," proposed by Otto Hehner, Esq., F.I.C., and replied to by T. H. Elliott, Esq., Secretary to the Board of Agriculture, and Professor Thorpe, LL.D., F.R.S.; "The Learned and Professional Societies," proposed by Dr. J. A. Voelcker, F.I.C., and replied to by A. G. Vernon Harcourt, Esq., D.C.L., LL.D., F.R.S., President of the Chemical Society, and Dr. W. J. Russell, F.R.S., President of the Institute of Chemistry; "The Society of Public Analysts," proposed by Professor H. E. Armstrong, LL.D., F.R.S., and replied to by Dr. Thomas Stevenson, F.R.C.P., F.I.C.; "Our Guests," proposed by C. E. Cassal, Esq., F.I.C., and replied to by J. Fletcher Moulton, Esq., Q.C., F.R.S.; "The Editorial Committee of *The Analyst*," proposed by Keating Stock, Esq., and replied to by A. H. Allen, Esq., in the absence of Dr. W. J. Sykes.

Dr. Bernard Dyer made a very capable chairman. The Editor of FOOD AND SANITATION came away wondering why analysts should begin with heat-diffusing substances, work their way through some thirteen such, and then throw miniature icebergs into their stomachs to chill the lot, when they could have a prime English tender steak and potatoes in their jackets at the Olde Cheshire Cheese, with pure beer to wash down a healthy English meal. These long dinners, we admit, are analytical, but we doubt if anyone could defend them physiologically. For our part, we analysed a plate of soup and some saddle of mutton, and pronounced both good. As to the wines—well, like a Scotch lady, an "auld licht," of whose sect only herself and the minister remained, we feel inclined to say, as she did when asked if the minister was saved: "We hae oor doots!"

MILK.

At Dublin, on January 13, John Hannon, 155, James's-street, was summoned by the Corporation for selling milk from which at least 25 per cent. of its fats had been abstracted. He was fined £5. The defendant said that he wished to have the milk sent to Somerset House for analysis, but Professor Tichbourne considered that it was now too late to have this done.

THE Paignton magistrates had before them, on January 13, a serious case of alleged milk adulteration, the defendant being Arthur George Rabbich, of West End Dairy.—Mr. T. W. Windeatt appeared for the District Council, who prosecuted, and Mr. F. J. Carter for Rabbich.—Mr. Windeatt, in an able address, said this was a serious charge, as, from the analyst's report, it was shown that 23.6 per cent. of water was added. The analyst further pointed out that the milk only contained 6.5 of non-fatty solids, whereas normal milk contained 8.5 per cent. This could only be the result of added water, as if the butter fat only was removed it would not alter the amount of non-fatty solids in the milk. The Council were simply doing their duty in bringing the case forward, and he asked for a conviction.

—Mr. Crathorn, sanitary inspector, proved obtaining samples of milk from eight sellers and submitting them to the public analyst. At each place he visited he informed the shopkeeper or assistant that he should send off the sample to the analyst.—For the defence, Mr. Carter raised several technical objections, which were replied to by Mr. Windeatt and overruled by the Bench.—The Bench, without hesitation, convicted, and, considering the case a very bad one, inflicted a fine of £5 and costs.—Thomas Berry was summoned for a similar offence, but in this case it was stated that Berry obtained his milk from the last defendant, and only added about 2 per cent.—The Bench took this into consideration, and only fined Berry 10s. inclusive.

At Luton, on January 13, William Poulton Thompson, of 109, Park-street, was summoned by Mr. Charles Wright, Sanitary Inspector, for selling milk adulterated. Mr. Wright, Inspector of Food and Drugs, said on December 24 he went to the defendant's shop and asked for a pint of new milk, with which he was served and paid for. He then informed defendant that he had purchased the milk for the purposes of analysis, and divided the sample into three parts. He then asked for a pint out of another vessel, and divided that for the same purpose. The analyst, Mr. A. E. Ekins, St. Albans, certified that there were 33 per cent. of added water in one sample, and 20 per cent. in the second sample.—Mr. Beck, in addressing the Bench on behalf of the defendant, said the case on the face of it was a bad case, and such classes of case were mischievous and an injustice to the poorer classes, who were unable to take precautions to ensure the purity of the article. They must, however, take care that the offence shall fall upon the right shoulders. The defendant had been engaged in the milk trade for four or five years. He had kept cows himself, but some time ago he had a mishap and the cow he then had died. Since that time he had had a milk supply from Mr. Jennings, of Grove-road, and the supply of milk for the afternoon of the day before Christmas had been delivered shortly before the inspector called and purchased the samples. These were sold in exactly the same condition as it was received from Mr. Jennings. He (Mr. Beck) considered that his client had unfortunately been deceived.—The Mayor said the Magistrates had very carefully considered the case, and it was because it was just possible that defendant had bought the milk in the condition he sold it that the Bench decided on the course they had. In the first case defendant would be fined £3 6s., including costs, and in the second case £2 10s., including costs.

At Liverpool, on January 13, Mary J. Cooke, milk dealer, Tiber-street, was fined 20s. and costs for having sold as new, milk which had been deprived of part of its cream; and John Birtle, Bowring-street, was fined 20s. and costs for having sold milk certified to contain six parts of added water to every hundred parts of the poorest milk.

At Sheffield, on January 12, Harriet Clarke, milk seller, of Cloughfields, was summoned for having sold milk consisting of milk of the poorest quality, 72 parts, and of added water 28 parts.—Mr. H. Sayer prosecuted, and said the girl was the servant of George Duke, cow-keeper, of Cloughfields, and had been summoned as the actual and physical seller of the milk, according to the opinions of the judges. It had always been held in similar cases that it was better to charge the person found selling the milk, as at the time it had passed out of the custody of the actual owner. The present case was a bad one, as there were only 72 parts of the poorest milk in the sample taken. When spoken to by the inspector the girl seemed disinclined to sell a sample of milk.—The defendant said she had purchased the milk just before she met the inspector, as she had run short.—Inspector Foster was asked by the chairman of the Bench as to whether he took steps to ascertain the truth of the girl's story, and to procure samples

from the man who had sold the milk, as well as from Duke's other servants. The inspector replied in the negative, and further said he did not ask the girl from whom she bought it, as she told him she would have to buy milk if she sold him any. She did not say she had already bought extra milk. He did not take steps to obtain other samples from Duke, because he would have been compelled to walk a mile or more across the town. It was not his practice to do this.—The Chairman said it was rather cruel to pounce on the girl without making enquiries and trying to bring the offence home to the man who sold the milk. Not the slightest trouble was taken to ascertain who had adulterated the milk, and it might have been discovered that day. The Bench were asked to convict the girl to save the inspector walking a mile.—A fine of 1s., including costs, was imposed, and the Chairman added: We should like the Press to take note that the punishment is entirely inadequate to the offence, if adequate means had been taken to ascertain who was responsible.—Dr. Littlejohn said the sample was taken at seven o'clock at night. It was the practice of the inspectors to take a sample from the owners, but in this case the cow-shed was a considerable distance away, and if the inspector had gone there Duke and his son would probably have been out, and a sample of the same milk could not have been obtained.—The Chairman said he had no doubt that the inspector would naturally want to get home at seven o'clock at night. It was very awkward to fine people when they did not know who was guilty or responsible. A young girl like the defendant was not likely to be convicted to save the inspector trouble at seven o'clock at night. There should be some discrimination.

JOHN WHITWORTH, milk-seller, of No. 12, Monmouth-street, was summoned for selling milk consisting of milk of the poorest quality 93 parts and of added water 7 parts. Mr. H. Sayer prosecuted. The defendant was before the Court last November for a similar offence, and was now fined £1.

COFFEE.

At Cheltenham, Rose Townley, of Marlborough-place, corner of Townsend-street, was summoned for selling adulterated coffee.—P. S. Dobbs gave evidence as to asking for half-a pound of coffee, on December 10, and being supplied (at 8d.) with what Mr. Embrey's analysis showed to be chiefly chicory. The certificate stated—"The sample is adulterated with chicory to the extent of at least 86 per cent., the amount of coffee being 14 per cent."—Defendant pleaded that she had no intention of doing wrong, that she had only been in business three weeks, and that she had only sold one pound of coffee altogether.—The Bench fined her £1 and costs.

At Westminster, on January 12, J. B. Parker, proprietor of grocery stores at Vauxhall-bridge-road, appeared before Mr. De Rutzen to a summons at the instance of the Westminster Vestry, for selling a mixture containing a preponderating proportion of chicory as coffee.—Mr. Percy Gates prosecuted for the Vestry, and Mr. Dutton defended.—A young girl, acting as the agent of Mr. Dee, the inspector, purchased half a pound of "one-and-fourpenny" coffee at the defendant's shop, which, on analysis, was found to consist of 60 per cent. of chicory and 40 per cent. of coffee. The mixture was wrapped in an orange-coloured paper, with a printed notice upon it as to the contents being a mixture, but as to whether or not the attention of the purchaser was specifically called to that fact there was conflicting evidence.—Mr. Gates submitted that the label afforded the vendor no protection, as there was a fraudulent intention to increase bulk.—Witnesses were called for the defendant to prove his version of the conversation at the time of purchase, and Mr. De Rutzen said he

thought he had made out his case.—The summons would be dismissed, but without costs.

At Wisbech, James Henry Inman, grocer and draper, Upwell, was summoned for selling to Supt. Dockerill a certain article, viz., coffee, which was adulterated with 40 per cent. of chicory, and was not of the substance demanded by the purchaser, on December 8th.—Defendant said he admitted that his wife sold the article, but it was not sold as pure coffee.—The Bench said that was a plea of not guilty, and Supt. Dockerill said he was an inspector under the Food and Drugs Act, 1875. On the date in question he called at the defendant's shop and saw Mrs. Inman. He asked her if she sold coffee, and she said "Yes," and asked him if he would like a packer or loose coffee. He said he would have $\frac{1}{2}$ lb of loose coffee. She took a tin which he could not see and went to the other end of the shop where he could not see what she was doing, and returned with three-quarters of a pound in a paper. She said the price was 9d., and he then told her that he had purchased it for the purpose of having it analysed. She said, "I will show you where I took it from." He said "I have purchased coffee," and then she went into the other part of the shop and fetched a tin from which she said she had taken the article. The tin had a label on it bearing the words "Fine French coffee carefully prepared with chicory of the finest growth." He said, "Had I not told you that I had purchased this for the purpose of having it analysed, I should have gone away with this as coffee, for which I had asked." He then divided the article into three parts, and on the following day he took one of the samples to Mr. J. West Knights, of Cambridge, the Public Analyst. On December 18th he received a certificate from Mr. Knights, showing that the sample contained 40 per cent. of chicory.—Defendant said coffee was an article that was rarely asked for. He was not asked for it once in six months. He kept that tin for his own use, because he preferred it in that form.—The Chairman said it was kept in the shop.—Defendant said it was kept in the shop, and if anyone wanted some of it they could have it. It was not intended to be sold as pure coffee, and it was not sold at the price of pure coffee. If he had been there, and Mr. Dockerill had asked him for coffee, he should have told him what it was.—Supt. Dockerill: And then I should not have purchased.—The Chairman said the Bench considered that was a clear case of infringement of the Act. The value of coffee was 1s. 8d. per lb., and chicory 4d. or 5d. per lb. The full penalty to which he was liable was £20, but they would fine him 40s. and 11s. costs. They did that entirely in the interests of the public.

THE ADULTERATION ACTS IN SHEFFIELD.

MR. A. H. ALLEN, city analyst, reports to the Health Committee:—During the quarter ending on December 25 last, I received and duly analysed and reported on a total number of 93 samples, all of which were submitted by the Inspectors appointed under the Act. Of 73 samples of milk, 45 were genuine, or of fair quality, and 15 others of inferior or suspiciously poor quality. In addition to these, six samples were found to be adulterated with water in proportions estimated at 7, 14, 16, 20, 28, and 30 per cent. respectively. Besides these, one sample sold as "old milk" consisted of old milk adulterated with 30 per cent. of added water; and six samples sold as "new milk" were found to be skimmed, containing respectively only about six-sevenths, six-sevenths, two-thirds, two-thirds, four-fifths, and four-fifths of the minimum proportion of fat natural to genuine new milk. Twenty samples of spirit have been examined. Of these, seven samples of whisky were found to be above the legal limit of strength, namely 25 degrees under proof, while three were adulterated with water in such quantity as to bring them to the respective strengths of 27·9, 30·1,

and 36·7 degrees under proof. Of ten samples of gin eight were found genuine, and two were diluted with an excessive proportion of water, being reduced respectively to 37·5 and 43·3 degrees under proof.

PURE BEER AND DR. STEVENSON.

SPEAKING at a dinner of the Institute of Brewing on January 15, Dr. Thos. Stevenson is reported, in the *Morning Advertiser*, to have stated that in his experience as public analyst he could say that their product (beer) compared most favourably with the production of any other trade. (Hear, hear.) He had been approached by both sides to appear before a body, to which he need not at present refer, to give his opinion on the product of the brewery. He had refused to appear, as, being a public analyst, he held a neutral position. (Hear, hear.) Which, being translated, means to "mugwump," or "sit upon the fence." We are amongst those who hope that even without the assistance of Dr. Thos. Stevenson the use of substitutes for malt and hops will yet be abolished. We should have thought a little beer experiment Bedford treated Dr. Stevenson to would have given him a keener interest in doctored beer than he apparently possesses.

THE HARBEN MEDAL.

At a meeting of the Harben Nomination Committee, held last month in connection with the British Institute of Public Health, Professor Max von Pettenkofer, Scientific Director of Liebig's Extract of Meat Company, was nominated Harben Gold Medallist for 1897. The medal was founded in 1895 by Henry Harben, Esq., J.P., for the recognition of eminent service to the public health, and one presentation is made every year.

WORCESTERSHIRE AND THE FOOD AND DRUGS ACTS.

THE Sanitary Committee of the Worcestershire County Council recommend that 600 samples should be taken yearly, and the Standing Joint Committee have adopted the view of the chief constable, that one-half should be taken by the sanitary officers and one-half by the police.

THE BORACIC ACID QUESTION.

THE Birmingham Health Committee have decided to proceed with the taking of samples of milk, and testing them for the purpose of ascertaining whether they contain boracic acid. With regard to butter and provisions generally, it was resolved to communicate with the Local Government Board, and to ask them to investigate the whole question for the purpose of advising local authorities whether the presence of boracic acids in foods is injurious to health. If the Local Government Board (says the *Grocers' Journal*) come to the conclusion that a small admixture is not injurious, then they will be asked to issue some regulation defining the quantities, and providing that those quantities shall be marked on the article sold. The action taken by Birmingham in the matter will be of beneficial interest, not only locally, but throughout the country.

FOOD ADULTERATION IN MANCHESTER.

DURING the quarter ending December 31 last, out of 410 samples analysed by Mr. C. Estcourt, the City Analyst, 10 were found to be adulterated, viz., milk two, butter four, coffee one, mustard two, spirits one. The samples analysed included milk 259, butter 37, spirits 24, beer 8, tea 10, coffee 8, lard 8, pepper 8, bread 8, mustard 6, and preserves and sweets 8.

MANCHESTER BUTTER MERCHANTS AND THE ADULTERATION LAWS.

IN view of the intolerable position in which wholesale butter merchants find themselves owing to their absolute responsibility for the purity of butter sold by them to retailers, as shown by repeated prosecutions under the Sale of Food and Drug Acts recently, a meeting of the Produce Sectional Committee of the Manchester Chamber of Commerce was held on Friday in the board-room of the Chamber. Mr. John Makeague occupied the chair.

In reply to an inquiry which had been addressed by the Secretary of the Chamber to the President of the Local Government Board, a letter was read to the meeting stating that the Department was unable to give the Chamber any information on the question as to whether a Bill for Amending the Sale of Food and Drugs Acts would be introduced during the coming Session of Parliament.

It had been intended, if possible, to concert measures for placing the views of the butter trade before the leader of the House of Commons, Mr. A. J. Balfour, on the occasion of his visit to his constituents on the following day. A letter was, however, read from the right hon. gentleman stating that the time at his disposal would be too short for an interview, but he would be glad to carefully consider any written representations which might be made to him.

After some discussion, the following resolution was adopted:—"That this meeting of the Produce Section of the Manchester Chamber of Commerce authorises the Executive Committee to urge upon Mr. Balfour, by deputation or otherwise, the necessity for carrying a Bill through Parliament during the coming Session, amending the Sale of Food and Drugs Acts."

It was agreed that the representations to be made should not refer in any way to the sale of margarine.—*Grocer's Review*.

KENSINGTON AND THE PURITY OF LONDON WATER.

AT the last meeting of the Vestry, Mr. Chas. E. Cassal, F.I.C., public analyst, reported:—

"In accordance with the request of the Special Purposes Committee, I have read the correspondence and articles which have recently appeared in the *Times* newspaper upon 'The Purity of London Water,' and I beg to report upon the same as follows:—

"The correspondence relates to the bacteriological aspects of the question, and merely amounts to a controversy of no great present importance as to the accuracy and significance of the 'bacterioscopic' results obtained by experts acting for the London County Council and other investigators. The articles contain comments upon the matters dealt with in the correspondence, and upon the value and meaning of certain reports made to the London County Council.

"I am of opinion that it would serve no useful purpose to enter into a detailed discussion of the matters in dispute in this report. The practical value of bacteriological methods for the purpose of testing the purity of water and the degree of efficiency of filtration and of other purification processes have been greatly exaggerated. While—when applied in conjunction with adequate chemical and microscopical processes of analysis—bacteriological investigations may afford valuable information, in the present state of knowledge bacteriological results are frequently in the highest degree misleading, and most erroneous conclusions are liable to be drawn from them. The correspondence referred to in itself furnished ample proof of the truth of these statements, inasmuch as it shows that the bacteriological experts concerned are completely, and apparently hopelessly, at variance in regard to the methods to be employed, as well as with respect to the significance to be attached to the results obtained. The

consequence is that the bacteriological method has, deservedly, been still further discredited by the controversy.

"The matters dealt with in the *Times* have no obvious or direct bearing upon the complaints which the Vestry of Kensington, acting under the provisions of the Metropolis Water Acts, have from time to time addressed to the Local Government Board. Those complaints in each case were founded upon reports of complete chemical and microscopical analyses of water representing what was being delivered to the consumer at certain points and at certain times, and not merely upon the results of more or less illusory bacteriological tests. The accuracy of the evidence in these cases has never been controverted, and it could not be controverted by bacteriological results of any kind."

BO'NESS AND ITS SANITARY INSPECTOR.

ANOTHER stage in the long protracted dispute between Bo'ness Town Council and Mr. William S. Burr, sanitary inspector, was entered upon on January 12. At a meeting of the Town Council, a letter was read from Mr. Burr's agents regarding the settlement of Mr. Burr's expenses incurred in the recent action in the Court of Session. The Commissioners' agents had decree against Mr. Burr for £220, a sum which they knew he could not pay, and they threatened a charge if not paid at once. The agents trusted the Town Council would see their way to modify the claim.—Councillor Baxter moved that Mr. Burr be asked to place his resignation in the hands of the Council and of the Local Government Board before his claim is taken into consideration.—Bailie Hill seconded.—The Provost said he would not treat to the extent of a penny unless that was done as a preliminary. They had had a long and stiff fight, and a lot of money had been spent at the instance of Mr. Burr, and, he would add, of the Local Government Board. If it had not been for the action of the Board, the Council might have been spared all this trouble and expense.—After other members had spoken strongly in favour of Mr. Baxter's motion, it was agreed to hold a special meeting, and invite Mr. Burr's agents to be present to discuss the whole matter.

We trust Mr. Burr will not accede to this request to entirely ruin himself, for the measure of consideration he would get would be, we suspect, scant indeed.

ANALYSIS OF GLASGOW WHISKY.

IN his fortnightly report submitted to the Corporation, Mr. Fyfe, sanitary inspector, submits an analysis by Dr. Tatlock and Dr. Clark, city analysts, of thirteen samples of Glasgow whisky obtained under the Food and Drugs Act in the poorer localities of the city. Dr. Tatlock says, with reference to five samples, that they were "strong, of rather raw flavour, not sufficiently matured." One was "strongly-flavoured spirit, somewhat mellowed by age; for cheap whisky, not bad." Dr. Clark says that, apart from their age and deficiency of flavour, no exception could be taken to any of the whiskies analysed by him. The price paid was 6d. a gill, or 2s. 6d. a bottle, except in one case, in which the price was 5d. a gill.

EXCESS WATER IN BUTTER.

AT Cork, on January 11, James Hartnett, a farmer, residing at Castletown-Kinneigh, near Enniskeane, was summoned by the Cork Butter Market Trustees for having, on December 8, sent to the market a firkin of butter which contained at least 3 per cent. of water in excess of the quantity allowed in ordinary butter.—Mr. A. Blake appeared for the complainants.—Mr. Forrest, superintendent of the market, deposed that the defendant's butter contained 20 per cent. of water. The

highest percentage of water allowed was 18 per cent. —Defendant said he was not present at the filling of the butter, and knew nothing about it. A fine of £1 was imposed.

JERSEY (U.S.A.) AND LONDON, ENGLAND: A LESSON IN MONOPOLIES.

LONDON's water monopoly has its counterpart in America, but, to their credit be it said, papers owned by foreigners in America are not so dumb about the evils as those of the largest circulations owned by foreigners in London. The *New York World*, Jan. 5, says:—

"The *World* yesterday published the first chapter of a careful investigation of the facts in the case of the people of Jersey City and the neighbouring towns, against the East Jersey Water Company. It was clearly shown, in this presentment, that these people are now fighting, not only for deliverance from a thieving monopoly, but for health and life.

"Year after year the monopoly has drawn its water from the Passaic, fouled by hundreds of towns and manufactories, and has poured the horrible stuff, full of sewage, chemicals, and disease germs, into the houses of the people. Year after year the people, led by the physicians, have pleaded with municipal assemblies and with the Legislature in vain. If the Smith machine was in power, the monopoly bought it up. If the Hobart machine controlled the Government, the monopoly used it in turn.

"Now the matter is up again in Jersey City, and the people are making a brave fight against odds. Their servants, the Finance Commissioners, have betrayed them, and the Mayor, Wanser, shows alarming signs of friendliness to the purveyors of foul and disease-laden water.

"The people of the whole State are invited to watch this contest between the city and a corrupt monopoly."

That is just what we are doing in London, watching a fight waged by public health against a corrupt monopoly and its hireling expert liars, who periodically proclaim semi-filtered sewage and drainage pure water. New Jersey has our sympathy, and we wish the *New York World* success in its crusade. Outside *The Star* and *The Daily Chronicle*, we have seen no hearty disposition on the part of our London press to place public health higher than monopolists' interests.

ACONITE FOR HORSE RADISH.

A MEDICAL man relates a curious incident, says the *Manchester Guardian*. The other day his dog, a fox terrier, attracted his notice in a special manner by incessantly protruding and withdrawing his tongue. After a short interval it developed further anomalous symptoms. It began to walk in a peculiarly "gingerly" fashion, and then commenced to gnaw its forefeet until they bled. Next its breathing became slower and oppressed, with failing pulse, so that the conclusion was arrived at that its condition was due to poisoning. Inquiry revealed the fact that there was some "horse radish" in the house, which had been dug up in the garden a short time before the dog became ill. One of the roots was found with the impression of the dog's teeth upon it, and partly chewed. The "horse radish" proved on examination to be nothing less than the deadly *aconitum napellus*, and the mystery was explained. The dog ultimately recovered. Its owner stated that he felt much indebted to the dog, for had it not first "sampled" the "horse radish," he, and probably the whole household, would have been poisoned on the next day, when a joint of roast beef, for which the "horse radish" had been obtained, formed part of the dinner.

BUTTER AND MILK CASES.

At West Ham, George Day, a milk dealer, of 16, Carlton-street, Canning Town, was summoned by Dr.

C. Sanders, medical officer of health for West Ham, on January 13, for selling milk adulterated with 31 per cent. of added water. The defendant pleaded guilty and said he was very sorry; he put a little water in after he bought it. Mr. Baggallay: £10 and costs—£10 17s. 6d. in all.—Mary James, of 16, Rathbone-street, Canning Town, summoned for a similar offence, did not appear in person. The milk was proved to have been adulterated with 19 per cent. of added water, and a fine of £5 and £1 os. 6d. costs was imposed.—Mary Evans, of 40, Rathbone-street, Canning Town, pleaded that she sold the milk as she bought it. The adulteration was 18 per cent., and a fine of £4 and 19s. 6d. costs was imposed.—Samuel Hyde, of 36, Rathbone-street, Canning Town, whose milk was adulterated with 6 per cent. of added water, attributed the water to the cows being fed on mangolds. He was fined 40s. and 17s. 6d. costs.—John Williams, of 32, Woodstock-street, Canning Town, pleaded guilty to an adulteration of 11 per cent. added water, and was also fined 40s. and 19s. 6d. costs.—William Treweek, of 87, Plaistow-road, West Ham, was summoned for selling as butter a mixture containing 70 per cent. of margarine. He pleaded guilty, urging that an assistant sold the mixture from a wrong slab. He was fined £5 and 25s. costs.

A GLASGOW INFIRMARY MILK SUPPLY.

At Glasgow, before Sheriff Strachan, on January 11, James Shanks, farmer, Dalnottar, Old Kilpatrick, was charged at the instance of the Glasgow Sanitary Authorities with having, on November 14, in pursuance of a contract with John Bryce, wholesale and retail dairyman, 18, Cleveland-street, delivered nine gallons of sweet milk to the Western Infirmary, which, on analysis, was found to contain 2 per cent. of added water; nine gallons, containing 3 per cent. of added water; nine gallons deficient in natural fat to the extent of 1 per cent.; and nine gallons deficient in natural fat to the extent of 1 per cent.; also nine gallons of skim milk which contained 14 per cent. of added water. He pleaded not guilty, and was defended by Mr. Macfarlane, writer, Dumbarton, who said his special defence was that there had been a conspiracy against Shanks by his servants, with whom he was at variance. Mr. John Lindsay, interim clerk of police, prosecuted.

John Bryce gave evidence as to the contract. He admitted in cross-examination that at the Martinmas term he met the respondent's vanman at the market in Glasgow. The vanman introduced him to two girls who had been in respondent's employment up till then, and he treated them to pies and lemonade. There was a civil action pending for an account of £85 for the milk.

Inspectors Hamilton and Armstrong stated that on November 13 Mr. Bryce called at the Sanitary Office, and as a result they went to the Western Infirmary the following morning, and took samples of the milk as it was being poured out.

Dr. Tatlock submitted his analysis of the samples. In cross-examination he admitted that milk of individual cows had been known to be as poor as these samples, but the latter were below the average. The samples labelled were below the Somerset House standard.

For the defence,

Mr. Shanks stated that before November 14 he gave notice in writing to Mr. Bryce that he would cease to supply him with milk. About a month before Nov. 14 his wife was killed by a bull. After that he had trouble with two byremaids, who left his service at the Martinmas term. They had threatened him. He had done his best to discover them, but could not do so. The vanman had also left his employment. No water was put into the milk, as far as he knew.

Mrs. Conboy stated that up till Martinmas she was principal dairymaid in Mr. Shanks' employment. On November 14, the vanman, when he came home, told

her that the sanitary inspectors had taken samples of the milk. He seemed quite rejoiced, and added that it would be a day's wages to him when he went to Glasgow. The two byremaids had been at variance with Mr. Shanks, and she heard them say that they would do their utmost to get him punished. On the day of Mrs. Shanks' funeral the two girls were singing and shouting in the byre. Witness had never seen water put into milk, and never heard a complaint before about the quality.

Robert Allardyce stated that while the people were assembling for Mrs. Shanks' funeral, the two girls referred to were roaring and laughing in the byre. He checked them, but they took no notice. After they left respondent's service he heard them say, "We have got a hold of the old — now, and will do for him." He understood that that referred to this case. He had made every effort to discover the van-man and the two byremaids, but had not seen them since he saw them in a public-house in Gallowgate with Mr. Bryce.

Mr. Lindsay withdrew the two charges relating to a deficiency of 1 per cent. of fat.

The Sheriff, in giving judgment, said that the charge relating to 2 per cent. might also have been withdrawn because it was too small a percentage to convict a man upon. As regarded the 3 per cent. and the 14 per cent. there had undoubtedly been adulteration, but it was quite clear that neither Shanks nor his housekeeper had tampered with the milk in any way. After reviewing the evidence, the Sheriff said it would be a gross injustice to hold Shanks guilty. He, therefore, dismissed the case.

A RESOLUTION calling on the Government to reconsider the Food and Drugs Adulteration Acts has been passed by the Metropolitan Grocers' and Provision Dealers' Association.

THE INFLUENCE OF SURROUNDINGS.

(Continued from page 34.)

IN the course of my daily visiting I have often heard the remark that children who run about these courts and alleys barefooted and poorly clad look the picture of health. Alas! it is only the strongest who survive; the mortality among children in such places is appalling. While such rookeries remain, schools are almost useless, and the principles of Christianity excite only ridicule and contempt in place of feelings of the most opposite character; can it be wondered at that parents whose very circumstances almost impel them from their wretched and unhealthy homes find a brief obliviousness to their present misery in intemperance? I say unhealthy homes, for, although everything has been done under the Acts that possibly can be done short of pulling down, it is impossible, from their construction, to render them healthy.

No sooner shall they be removed from the influence of surroundings such as these, and given room accommodation which shall not render outrages on common decency even necessary and unavoidable, than results shall follow of a kind but little anticipated by those not practically familiar with the subject.

And what of some of our suburbs to-day? Any person who takes notes of the present system of depositing rubbish, covering water-courses and swamps with *débris* of dust-bins for levelling off and building dwellings, must see the danger which lurks beneath. Around London there are acres of land covered by dwellings built on refuse from houses, and instances can be mentioned of grave-yards having been built over, and the houses constructed too often without those safeguards devised to protect the inmates from damp and ground air. These neighbourhoods are never free from infection, and yet this making up of ground for building purposes is going on at the present time.

An increased rate of mortality is only one of the results of a neglect of sanitary preventive measures, for death is not the worst of evils attending epidemics; the permanent weakness, poverty and destitution which often ensue, affecting whole sections of a people, inflict a greater injury than the death of a certain number of the population.

To pave streets, to construct sewers and to drain houses, however necessary these works may be, are among the least important of the duties which devolve upon the Sanitary Authority. But to improve the social condition of the poorer classes, to check the spread of disease and to prolong the term of human life, are works of a high and ennobling character, and are duties which devolve upon the Local Authority; but until these insanitary areas are swept clean away, the works before mentioned will be of little use. The first point to be achieved is to improve their physical condition, and the only way in which this can be accomplished is by preventing their living in dwellings unfit for the habitation of rational and intelligent beings.

A clean, well-ordered house exercises over its inmates a moral no less than a physical influence, and has a direct tendency to make the members of a family sober, peaceful and considerate of the feelings and happiness of others. It is often found that when an intelligent artisan has once become acquainted with the advantages of any of the laws of civilisation, he is not slow to avail himself of their aid, and habits of cleanliness once formed, his sensibilities become improved to such an extent that he will not live in a room which is unhealthy, or in a house that has bad drains.

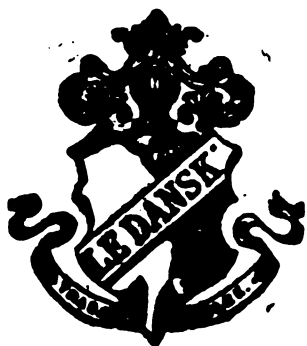
The dwelling cannot be said to be fit for human habitation if it has not the advantage of a good drainage system.

There are many systems of drainage in vogue, but I propose to-night to speak mainly on the water-carriage system, and there is little doubt but that this is upon the whole the cleanest and by far the least objectionable method of removing the *fæces* and household refuse. It has undoubtedly proved a great benefit from a sanitary point of view, as by this means the *fæces* and house refuse are quickly removed from the dwelling to the sewer. The only drawback seems to be that the house is connected to an underground system of tubes in which foul gases generate, thereby rendering the house liable to be polluted by the escape of sewer gas. It will not be necessary here to dilate upon the fact that sewage, immediately it is discharged into the drain, commences to decompose, and upon the rapidity of its transit from the house to the outfall works depend the amount of offensive and deleterious gases given off. In the older systems of drainage the gases were scarcely thought of, because the drains, if not open, were anything but tight; but the modern system of thorough sealing of sewers and pipe drains has led the gases occasionally to be driven back to the house-traps, and to prevent these being forced, a system of ventilation has been devised as to the merit of which there is much conflict of opinion.

Sewer air or sewer gas, according to medical experts, is an admixture of various gases, some of which, such as carbonic acid, nitrogen and carbonated hydrogen may be deemed harmless or nearly so, while others in their crude state are not only dangerous, but actually poisonous. To prevent the accumulation of these, it is absolutely necessary that our sewers should be self-cleansing and effectually ventilated, and the best method of dealing with this great question of ventilation is an enigma which is engaging the earnest attention of engineers and medical officers at the present moment. As to this, I shall offer some suggestions later on, and on which I trust we may have a good discussion, as it is from the views and experiences of our brother officers that we hope to improve our knowledge of this and other subjects.

(To be continued.)

To the Grocers, Provision Merchants, Pastry-Cooks, Confectioners, and
the Public of the United Kingdom.



"LE DANSK"

MARGARINE.

A Perfect, Pure, and Wholesome Butter Substitute, for Table use
and every description of Pastry. In Colour, Flavour, and Texture,
equal to Best Brands of Butter, costing one-third less. This unique product stands far above
other makes, and has received honour everywhere. Has the largest sale in the world!

"THE LANCET" (the leading Medical authority of the world) says:—

"It is of pure and excellent quality."

Monsieur ARNAUD (Chef to his Grace the Duke of Westminster) says:—

"I hereby certify that **"LE DANSK"** is equal to butter for pastry making in the way
of taste and lightness, and superior to same in giving it a rich colour. I can testify to the above, having
made full experiment.

(Signed) S. ARNAUD."

AGENTS FOR THE SALE OF "LE DANSK" IN SEALED BOXES

H. Alexander, 66, Mount Grove-road, Highbury.
Ambrose & Son, General Supply Stores, Loughton, E.
Bayly's Stores, 16, Seymour-st., Euston-sq., N.W.
James Bartlett, 82, Chalk Farm-road, N.W.
John Collier & Co., 120 and 122, Bow-road, East.
W. J. Cartwright, The Stores, and 6, Chichele-
parade, Cricklewood, N.W.; also at 6, Station-
parade, Willesden, N.W.
Crisp & Co., 67-83, Seven Sisters'-road, N.
W. H. Curry, 40, High-street, South Norwood.
W. H. Cullen, 2, Pond's-buildings, High-road,
Lower Clapton.
W. H. Dent, 297, Kennington-cross, S.E.
Dowling & Son, 20 & 30, King-st., Tower Hill, E.C.
The Crystal Palace Supply Stores, 80, Westow-hill,
Upper Norwood. Edmonds & Co., proprietors.
Rowland Ellis, 119, High-street, West Norwood.
J. Everett & Co., Everett's Stores, St. James's-
street, Walthamstow, E.
T. G. Edwards (successor to Thomas Gibbs), 54,
Upper Baker-street, W.
Edwards & Son, 68, Marchmont-street, W.C.
J. Frear & Son, 1 & 2, Algernon-terrace, Hendon,
N.W., Victoria-road, Hendon, N.W., and Burnt
Oak, near Edgware.
W. & G. Forth (late H. Ward & Co.) 272, High-
road, Chiswick, W.
James Grogan & Co., 173, Blackstock-road, N.,
and 1, Broadway, Highbury.
D. A. Guy, 4, Formosa-st., Warrington-crescent, W.
T. W. Hawes, 11 & 13, High-st., Camden Town.
Harrod's Stores, Limited, Brompton-road, S.W.
F. Holland, 10, Grove-terrace, Holland-park, W.
H. Hetherington, High-street, Woodford.

Jones Brothers, 348 to 366, Holloway-road, N.
R. Jones, 32 and 33, Christ-street, Poplar, E.
C. Kibble & Co., 47-47, Broadway, Deptford, S.E.
F. H. Kerry, 20, Bellevue-rd., Wandsworth Com-
mon, S.W.
John Kettle, 58, Woodgrange-road, Forest Gate.
The Kensington Stores, 64 to 74, Hammersmith-
road, W.
Leverett & Frye, Ltd., 1 & 2, Strathavon-terrace,
Hendon, N.W.
Leverett & Frye, Ltd., 31, High-st., Islington, N.
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Food & Sanitation

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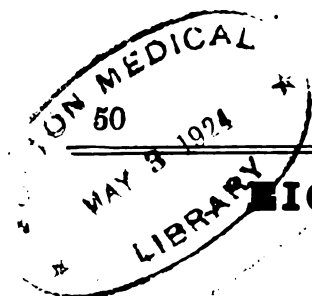
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Food and Sanitation.

SATURDAY, JANUARY 30TH, 1897.

A SINISTER COINCIDENCE.

ON January 9 we published the following statement of how the present 73° F. Abel flash point came to be adopted, or "was worked" in the interests of the American oil gang of convicted contrivers of arson and dynamite explosions:—"The first attempt at the regulation of the flash point of oils was made by the Government in 1862, and in the Act then passed permission was given to search for oil flashing below 100° F. in the same way as for gunpowder. Owing to the absence of definite instructions as to how to test the flash point, errors and differences were constantly arising, so that in 1860 Messrs. Abel, Attfield, and Letheby agreed on a specific test of 100° F., in an open cup, half full of oil and heated by a water

bath. This test, the author stated, had been found in practice to give results agreeing substantially with those obtained in Prof. Abel's apparatus, which was subsequently introduced and is to-day the standard tester. Strange to say, however, within a week of the drafting of the schedule embodying his specified test (which was the conjoint production of the gentlemen named above), the directions for testing were cancelled, Sir J. Fergusson, who had charge of the Bill, explaining that he had done so on the advice of the Petroleum Association and Sir F. Abel (then Prof. Abel), and this advice was followed, despite the protests of the other experts who had co-operated in the formulation of the revised method. In 1876 the Abel tester was introduced (an excellent apparatus *per se*), and it was then contended that the difference between the old open test of 100° F. and Abel's close test was 27° F.; the standard of safety was therefore reduced to 73° F. and remains there to-day. Had the standard of 100° been adhered to during the last ten years there would have been many fewer fires from the employment of mineral oils, and many lives would have been saved."

The above statement was made by Dr. Stevenson Macadam in a lecture to the Manchester Chemical Society recently.

Our contemporary, the *Star*, of January 26, invites the attention of members of the House of Commons to a peculiar incident in the career of a Sir J. Fergusson:—

"THE TELEPHONE AGREEMENT.

"SIR J. FERGUSSON, EX-POSTMASTER-GENERAL, JOINS THE BOARD OF THE TELEPHONE CO.

"On June 28, 1892, the Royal Assent was given to a Bill for the development of the telephone system of the United Kingdom by the State acquisition of the existing trunk lines and the addition of others, to complete a system of communication between all the important towns in the kingdom. The effect of the arrangement made between the Government and the National Telephone Company was universally recognised as being enormously to the advantage of the company. It will be remembered that a storm of public protest was aroused at an agreement which it was felt could have no other effect than that of handing over the public to the tender mercies of a practically unrestricted telephone monopoly. Question after question was asked in the House of Commons, but the memorandum of agreement was never produced by Mr. Arnold Morley until August 13, 1894. It then transpired that the document on which the objectionable agreement had been based was signed by Sir James Fergusson on behalf of the Government, and by Mr. James Staats Forbes, on behalf of the National Telephone Company, on August 11, 1892, that is to say, on the very day on which the division occurred which turned the Conservative party out of office and Sir James Fergusson out of the Postmaster-Generalship.

"It may be recalled that when the Select Committee on Telephones commenced its sittings at Westminster, March 22, 1895, with Mr. Arnold Morley, the Postmaster-General, in the chair, he had for his right-hand neighbour his predecessor in office, Sir James Fergusson. All the inquiry in the world, however, would not alter the fact that the public are over-ridden by a monopoly of the most complete kind. . . .

"Now, let us mark the sequel. The last report of the National Telephone Company, Limited, was presented to the shareholders of that company on Thursday, July 30, 1896. On the face of the document appeared the names of eleven directors, of whom it was specified that four were then retiring, and, being eligible, would offer themselves for re-election. The four gentlemen in question—Lord Harris, Mr. C. S. Agnew, Mr. G. H. Robertson, and Sir A. K. Rollit—were formally re-elected at the meeting. The 'Stock Exchange Year Book,' 1897, has just made its appearance, containing the official record of the National Telephone Company, Limited, compiled from information supplied

by the management. It therein appears that the number of the directors of the company has been quietly increased from eleven to twelve since the date of the last general meeting.

"The new member of the Board is Sir James Fergusson, Bart., M.P."

If this be the same Sir James Fergusson he may be able to explain the reasons which induced him to take the advice of the parties interested in securing the sale in England of murderous American refuse oils *the sale of which is not permitted even in America, where we hear so much about corruption, and which oils cause the roasting alive of, it is reckoned, one person per day in the United Kingdom*, as well as the destruction of an enormous amount of property. We think the Select Committee of the House of Commons on the petroleum question ought, if he be the same person, to give him the opportunity of making an explanation.

Taken in connection with this telephone business, we think with the *Star* that some enquiry and investigation by the House of Commons is necessary. We do not know if it is one and the same Sir J. Fergusson who was concerned in the flash-point decision and the telephone one, but if such be the case it is a sinister coincidence, and, as regards the "flash point," a very serious one, for the decision and the action of the Sir J. Fergusson who is responsible for the 73° F. flash-point has already caused the deaths by roasting alive of thousands of men, women, and children in the United Kingdom. We invite the attention of Members of Parliament, and of our spirited contemporary, the *Star*, to the following facts respecting the methods of the American oil gang.

A Congress investigation records in 1888, pp. 818 to 873, how this American oil gang bribed an employé of an oil distillery at Buffalo, antagonistic to them, to cause an explosion. This employé weighted down the safety valve with heavy iron and packed it with plaster of Paris, and then ordered the fireman to put coal into it until the fire-box was cherry-red. When this was accomplished he went away from the works, leaving the unsuspecting victims of this infernal work to explosion and roasting alive. Fortunately, the dastardly work was not well enough done, and the safety valve lifted itself, for despite weights and plaster, the unusual pressure blew it open, and it did not keep the gases in to explode, as had been planned by the American Oil gang. For this villainy some members of the gang were put upon their trial and convicted, but they were powerful enough to bribe the law, and, although the jury, on May 18, 1887, brought in a verdict "guilty, as charged in the indictment," an accommodating judge fined the criminals *two hundred and fifty dollars each*. He got his reward later in preferment to a supreme judicial position in America. The *New York World* said of the sentence: "It is calculated to make men, of more boldness than morals, blow up factories."

These damning statements *from official documents* speak for themselves. Like the *Star*, we wait an answer.

THE SEIZURE OF UNSOUND FRUIT: IMPORTANT POINT.

Jacob Rubinstein, fruit dealer, of Wentworth-street, Whitechapel, was summoned at Worship-street, on January 16, for selling to William Thake a box of oranges which were unsound and unfit for human food.—The facts were stated by Sanitary Inspector Harvey, of the Whitechapel Board, and it seemed that the box of oranges in question was handed over to him by Thake, a hawker, who had bought them in Spitalfields from the defendant. There was not a sound orange in the whole case, and Rubenstein, when they were taken to him, admitted having sold them for 5s., and refused

to give back the money. The goods were then seized by the inspector, and subsequently condemned and destroyed—Mr. Cluer pointed out that at the time of the seizure the goods were admittedly not exposed for sale, and further, they were not in the possession of any person for sale. The Inspector said he relied on the 3rd sub-section of the 47th section of the Act (Public Health, London, 1891), pointing out that the "person who had sold" was liable.—Mr. Cluer thought the case of "Reg. v. Dennis," 58 J.P., largely ruled the matter, and that Justice Grantham had laid down two necessary conditions as having to be taken together before the goods were liable to be seized. To afford the Whitechapel Vestry an opportunity of instructing Counsel to argue the point as to Rubenstein's liability under the Act the case was adjourned.—The Sanitary Inspector (Mr. Harvey) then applied for an order condemning a cask of apples seized by him that day, the apples being unfit for food.—Replying to Mr. Cluer, he said he had seized them in a stable where they were stored, he believed, in order that they might be picked over, and anything that might pass muster be offered for sale.—Mr. Cluer said there was no exposure for sale, nor did it appear that there was any "deposit for the purpose of sale." The apples might have been intended for manure, but unless they were a nuisance the owner of the premises had a right to keep them there, unless they were deposited for sale as food, or exposed for sale.—The Inspector said he could not say there was any exposure, but he remarked that the difficulties of working under the Act were very largely increased, and the amount of bad fruit and food vended among the Jewish poor in the East End of London was a constant source of danger.—Mr. Cluer said he would raise no difficulties to the working of the Act, but it would not be respectful on his part to act in opposition to the recent ruling of Mr. Justice Grantham.

IMPORTANT SPIRIT NOTICE CASE.

At the Brentford Petty Sessions, on January 16, before Mr. Montagu Sharpe, in the chair, and other magistrates, William Palmer, the licensee of the Prince Albert, Hampton-road, Twickenham, was summoned at the instance of Walter Tyler, an inspector under the Food and Drugs Act, for selling rum which, being 29·4 degrees under proof, was not of the nature, substance and quality demanded.

Mr. T. A. Woodbridge prosecuted on behalf of the Middlesex County Council; and Mr. Boxhall, barrister, appeared for the defendant.

Mr. Woodbridge stated that the case raised a point which was to some extent new, and one of immense importance to the trade. The prosecution was anxious to obtain a decision on this point, but it was not desired that in the event of a conviction the defendant's license should be endorsed. The proceedings were taken under the 6th and 8th sections of the Food and Drugs Act, which provided that if an article not of the substance, quality and nature demanded were sold to the prejudice of the purchaser a penalty should be imposed unless at the time of sale the purchaser were informed, either verbally or by a notice legibly printed on the article, that the thing sold was mixed or diluted. In this case rum below the standard required by law was given to the purchaser. It would be stated for the defence that there was displayed in the bar a notice to the effect that all spirits were sold as diluted, and undoubtedly it was the custom of the trade to regard such a notice as sufficient. He, however, contended that the display of such a notice did not constitute compliance with the 8th section of the Food and Drugs Act, and he quoted in support of this view a recent case from *FOOD AND SANITATION*, December 19, 1896, p. 605, in which Justices Wills and Wright had held that a notice of the kind displayed in a bar did not

protect a defendant who had, without other notice, sold rum which was 72·86 deg. under proof. The contention of the prosecution was, in brief, that whenever spirits below the legal standard were sold the purchaser must be informed either by word of mouth or a legible notice on the bottle that the spirits were sold as diluted.

John Churchill, an assistant to Inspector Tyler, stated that he purchased a shillingworth of rum from the defendant. At the time of the sale he was not informed that the rum was diluted, nor was there a notice to that effect on the bottle. He looked for the usual general notice in the bar, but did not see it until it was pointed out to him. The notice was at his back as he stood at the bar buying the rum.

Inspector Tyler corroborated the evidence of the previous witness. He added that he knew that for years it had been considered that such a notice as that displayed in the defendant's bar was sufficient notification under the 8th section of the Food and Drugs Act.

Cross-examined.—The witness said that rum lost spirit very quickly, and that might account for the rum in this case being 4·6 degrees more under proof than the law allowed.

Mr. Boxhall, for the defence, argued that the notice conspicuously displayed in the defendant's bar was sufficient protection to the purchaser, and that therefore the summons must be dismissed. He referred to the case of "*Sandy v. Small*," in which Lord Chief Justice Cockburn held that the methods of notification mentioned in the 8th section of the Act were not the only sufficient ones, and that the important point was whether the purchaser was prejudiced or not. In this case the purchaser knew that it was the custom of the house to sell diluted spirits, and if he did not know, there was the notice in the bar to inform him.

Mr. Woodbridge replied that the decision on which Mr. Boxhall relied was an old one, given just after the passing of the Act, and had since been reversed.

Mr. Montague Sharpe said the Bench held that as there was no notice on the bottle there must be a conviction, and the defendant was fined 20s. and costs.

Leave to appeal was given.

A BREWER ATTEMPTS TO BROWBEAT AN INSPECTOR.

ON the Town Clerk presenting accounts to the Dalkeith Police Commissioners the other day a discussion ensued over an item of £1 for whisky purchased by the town's inspector for the public analyst. Mr. Urquhart, a local brewer, said he thought it was far more important that they should have samples of milk and such staple foods. Addressing Mr. Goudie, he asked what set him to whisky? Had he had the milk analysed? Mr. Goudie replied that he had not as yet. Mr. Urquhart said this expense was quite uncalled for. He moved that Mr. Goudie do not act in this fashion again until instructed by the Public Health Committee. Mr. Goudie replied that neither the Magistrates nor the Committee had any power in the matter. If the Commissioners intended to restrict him, he would appeal to the Local Government Board. The Provost asked if he or the Commissioners were the masters? Mr. Goudie replied that he thought he had enough discretion to know when he was doing right or wrong. Ultimately the meeting agreed to a motion on the lines of Mr. Urquhart's suggestion.

SPIRITS.

At Twickenham, Charles Stinton, landlord of the Rising Sun public-house, was summoned under the provisions of the Food and Drugs Act for selling rum

29 degrees below proof.—Mr. Tyler stated that from certain information he went to the defendant's house and purchased one shillingworth of rum. He produced the analyst's certificate, which showed that it was diluted to the extent of four degrees more than allowed by law.—In defence, Mr. Stinton stated that his draught rum had "gone off," and his wife served the inspector from a bottle that was on the counter. He asked at the time that the rum should be returned to him in order that he might give the inspector some draught rum.—Mr. Tyler told the Bench that this request to return the rum was made after he had taken the sample and had told the defendant what it was wanted for.—The defendant told the Bench that he had been 17 years in the house.—After a consultation the Bench fined the defendant 20s. and costs, and ordered that his licence should be endorsed.—The decision was received with expressions of surprise in Court.—We understand that notice of appeal has been given.

At Dublin, on January 13, Peter Bioughall, 14, Winetavern-street, was summoned by the Corporation for selling a half-pint of whisky alleged to be adulterated by the addition of 20 per cent. of water, which reduced its strength to 40 degrees under proof, the greatest reduction allowed by statute being 25 degrees. The defendant was fined £5.

At Shepton Mallet, on January 16, Mrs. Elizabeth Perry, widow, and landlady of the Gurney Slade Inn, was summoned for selling a pint of brandy which was 30 degrees under proof, or 5 more than was allowed by the Act. Mrs. Mary Ford, of the Oakhill Inn, was similarly summoned for selling a pint of whisky 28 degrees under proof, or 3 degrees more than allowed by the Act. Mr. Roach defended in both cases. Defendants were fined 10s. and the costs, to be divided between them.

COFFEE.

At Aberdeen Sheriff Court, on January 13, Sheriff Brown on the Bench, three grocers were charged, at the instance of Mr. Kenneth Cameron, sanitary inspector, with contraventions of the Sale of Food and Drugs Act, in connection with the sale of coffee. In the first case, David Anderson, grocer, was charged with having, on December 7 last, in his shop in Justice-street, sold and delivered to the complainer—to his prejudice—one pound of coffee, which was not of the nature, substance, or quality of the article demanded, in respect that it contained ingredients foreign to coffee to the extent of not less than 20 per cent. He pleaded guilty.

Mr. Lamb, procurator fiscal, said the purchase was made by an assistant inspector on behalf of Mr. Cameron.

Mr. G. M. Aitken, solicitor, for the accused, said the purchaser asked for a pound of coffee, and there were various qualities of coffee, the cheaper kinds being freely mixed with chicory. The shopkeeper in this case asked what price the purchaser wished the coffee at, and the reply was, "What can you sell it at?" The shopkeeper said he could sell it at different prices, from 1s. 4d. to 2s. per lb. Pure coffee could not be had at less than 1s. 10d. or 2s. per lb. Anything under that must be a mixture of chicory and coffee. The purchaser asked the cheapest—that at 1s. 4d.—and was supplied with it. If he had asked pure coffee, he would have got it.

The Sheriff: What was asked?

Mr. Aitken: What was asked was coffee.

The Sheriff: It was coffee he asked, and it was coffee he did not get. (Laughter.)

His lordship indicated that he would take all the cases together.

George Beaton, grocer, was then charged with a similar case committed in his premises in King-street, on December 7, the coffee in this case containing foreign ingredients to the extent of at least 50 per cent. He pleaded guilty; and Mr. Ewen, solicitor, on his behalf, said the explanation was the same as in the previous case, with this additional—that the coffee was sold by an assistant. Mr. Beaton himself was always particular to say he was selling a mixture of coffee and chicory, if that was what he supplied.

George Hay, grocer, admitted having, in his premises in George-street, committed a similar offence, but the coffee supplied in this case contained foreign ingredients to the extent of not less than 80 per cent. Mr. Hay, on his own account, said the article was supplied by his daughter while he was busy with a traveller. His daughter had said that, in the presence of the purchaser, she asked him (Mr. Hay) what the price of chicory and coffee was, and that he replied to her, also in the hearing of the purchaser. Besides, the tin or case from which the article was supplied had painted on it, in large letters, "Chicory and coffee"; and that stood facing the customer all the time. In the circumstances, his daughter thought she had acted fully within the meaning of the Act. She admitted that the purchaser asked for coffee.

The Sheriff: That is the whole question—that you were asked for coffee.

Mr. Hay, continuing, said his daughter had been only a few months in the business, and the mistake of not calling attention to the fact that the mixture was one of chicory and coffee was committed in ignorance.

Sheriff Brown, in passing sentence, said such cases as these had not been very familiar in that Court for some time, which was evidence that the penalties imposed were adequate to check the evil. He was sorry to see them reappearing, and he was not able to sustain the pleas that had been offered, not in justification but in support of what was undoubtedly a statutory offence. The cases were manifestly distinguished from each other by the percentage of foreign ingredients. The sentences he was about to impose were undoubtedly substantial, but in his opinion it was right that they should be so, because the statute, in the public interest, fell to be strictly construed. Anderson would have to pay £2, or suffer 14 days' imprisonment; Beaton £3, or 21 days; and Hay £4, or 30 days.

COCOA.

At Trowbridge, on January 13, Herbert Gover, provision merchant, of Trowbridge, was summoned at the instance of Frank Beadesly, food and drug inspector under the County Council, for selling cocoa not of the nature, substance and quality demanded by the purchaser, and fined £2, including costs.

SUGAR ADULTERATION.

At North London, on January 14, a number of cases under the Adulteration of Food and Drugs Act were heard by Mr. Bros. The prosecutions were undertaken by the Islington Vestry, for whom Mr. Bramall, solicitor, appeared, and the defendants were twelve small grocery-shop keepers, who were summoned for selling as Demerara sugar a sugar which was not of the nature, substance, and quality demanded by the purchaser. Mr. Bramall said that this was the first prosecution of the kind in London. Demerara sugar was the finest moist sugar, but now beet sugar was being dyed to imitate Demerara sugar, and beet sugar

was being sold as such. In London lately, there had been started a number of factories for the dyeing of beet crystals, which came from Russia, Germany, and France, and the beet sugar was then passed off as Demerara. The case was one of considerable importance both to the sugar trade and to the public. Both the genuine sugar trade and the consumers were defrauded by the imitation. The names and addresses of the defendants were as follows; Eliza Sergeant, Orchard-street; William Williams, Culford-road; Alfred Shrimpton, Downham-road; William Marsh, Baxter-road; Nellie May, Mildmay-street; Daniel Richards, Balls Pond-road; Frederick Goodchild, Rotherfield-street; John Johnson, Sherborne-street; Mary Ann Morgan, Norfolk-road; William Gold, Newington Green-road; George Tulloch, Elmore-street; and James Bowles, Shepperton-road.—On the case of Eliza Sergeant being gone into, Miss Penelope Clarke and Sanitary Inspector Mernagh proved the purchase, and Mr. Bramall produced the certificate of the public analyst, which stated that the sample consisted of dyed beet crystals.—Mr. Quinton Hogg, sugar importer, of 23, Rood-lane, said that he had had 30 years' experience of the sugar trade, both in England and at the sugar plantations in Demerara.—Mr. Bramall: What is Demerara sugar?—Witness: Raw cane sugar, imported from Demerara, of a yellow, lemon, or gold colour.—Mr. Bramall: Is it dyed?—Witness: Certainly not.—Mr. Hogg went on to say that the difference between the cane and beet sugar could be detected by a simple test. If about an ounce of cane sugar were put into a tumbler of water the dye would come from the crystals and colour the water, which, however, would be perfectly clear. If, however, a similar quantity of Demerara sugar were placed in the water the molasses would cause the liquid to become clouded. Witness had submitted 14 samples taken by the inspector on this particular day to this test, and only two of them proved to be genuine Demerara or cane sugar. The rest were imitations, or beet crystals dyed to make them represent Demerara crystals.—Mr. Bros: Which sugar is the most valuable?—Witness: The cane. There is a difference of £1 per ton. Cane sugar must be used for the making of jam, wines, etc. In these manufactures cane sugar preserves, while beet sugar turns the manufactures bad after a time.—Dr. Teed, public analyst for Islington, formally proved his certificate. He arrived at the same result as Mr. Quinton Hogg did, but from a chemical examination.—Mr. Edward Kynaston, a sugar broker, of Mincing-lane, corroborated Mr. Hogg's evidence. The hearing of the case was subsequently adjourned.—In the case of Alfred Shrimpton, Mr. A. J. Ford, solicitor, appeared for the defence.—Mr. Ford cross-examined Mr. Quinton Hogg at some length, the witness denying that there was any insect matter in genuine Demerara sugar. There would certainly be none in the beet sugar. He would not say that the dye on the beet sugar was injurious to health, but what he did hold was that for economic purposes beet sugar was not as good as cane sugar. The ordinary buyer would be unable to detect the difference. Mr. Ford submitted to the witness three samples of yellow sugar, one of which Mr. Hogg pronounced to be beet sugar; the other two were cane sugars. Some of the sugars were then placed in tumblers of water, and the simple test which Mr. Hogg had mentioned in his evidence in the other case was found to verify Mr. Hogg's opinion. In re-examination, the witness said that the dyeing of beet sugar was doing a large amount of damage to the Demerara trade, and the public were being deceived. In cross-examination by Mr. Ford, Mr. Kynaston said that the appearance of the beet sugar was much better than that of the cheaper sorts of Demerara. The latter might be got at the same price or even less than the price of the beet, but the public would not be satisfied with the appearance of the cheaper cane sugar. Other evidence having been given, the whole of the cases were adjourned.

LIPTONS FINED FOR SUGAR ADULTERATED WITH CARBONATE OF LIME.

At Birmingham, on January 19, William Brace summoned Messrs. Lipton, the well-known provision merchants, for selling sugar adulterated with carbonate of lime. On December 18 Brace purchased 8lb. of sugar. It was used in tea, but it was said it would not dissolve, and the sediment was left at the bottom of the teacup. Dr. Hill, who analysed the sugar, stated that it contained 25 per cent. of carbonate of lime in crystals, the angles of which were extremely sharp, and would not digest. Carbonate of lime in its larger form was used for making pavements. The defence was that the sugar was brought from abroad, and was not touched by the sellers. It was a first quality, and bought at the best market. It was through no fault on the part of Messrs. Lipton that the case arose. The magistrates said they felt that the responsibility rested with the seller, and imposed a fine of £5 and costs. Notice of appeal was given.

MILK.

At Highgate, on January 18, William Ashford, of Lynton-road, Hornsey, was charged on a summons with refusing to serve milk to Arthur Liddell Bridge, an inspector of the Middlesex County Council.—The inspector stated that on Sunday morning, the 20th ult., he saw the defendant in Whiteman-road, Hornsey, engaged in delivering milk. He asked him for a pint of milk, but instead of serving him he drove away as hard as he could.—The defendant was fined 20s. and costs, Mr. Bodkin informing him that the full penalty was £10.

At the Nottingham Summons Court, on January 15, before Mr. C. G. Hill and Mr. J. B. Hutchinson, a number of summonses under the Food Adulteration Act were dealt with, in which Mr. H. P. Day appeared to support the summonses.

The first case concerned John William Preston, 21a, Woodborough-road, milk retailer. The summons accused him with having in his possession a pint of milk in which 17 per cent. of the fat had been abstracted, on December 5.—In this case the Borough Analyst reported a deficiency to the extent named in the summons. The inspector who gave evidence as to procuring the samples stated that the defendant came to his house, and a long conversation took place between them. Mr. Preston told him he had suspicions about part of the milk.—Mr. Clayton, who appeared to defend, stated that the defendant had been a milk seller in Nottingham for a number of years. He believed that as regards the present summons it was not sufficient, but that they must prove a criminal offence by further evidence as to actual abstraction of the fat. He relied upon the case of Hodgkin and Hindmarsh.—Mr. Day contended that the evidence adduced was sufficient to support the summons.—The Bench dismissed it, however, and permission was given Mr. Day to appeal.

William Hainsworth, Arkwright-street, also appeared to answer a similar summons.—Richard Edwards Burns, inspector of nuisances, said that on December 15, at 9 a.m., he bought some milk from the defendant for 1½d. Witness gave notice to the defendant in the ordinary way, and divided the milk. The analyst's report showed that no change had taken place in the milk to affect the analysis. In the opinion of the borough analyst there was 6 per cent. of added water.—Mr. Clayton, who appeared for defendant, submitted that it was unfair to take milk from the very bottom of

the can, and Mr. Day did not press the case, which was dismissed under the circumstances.

John Strawcroft, Copestake's-yard, St. Ann's Well-road, was also summoned. He pleaded not guilty.—Inspector Copley stated that on December 15 he bought one pint of new milk from the defendant for 2d. Witness explained to him that he was an inspector, and then divided the milk into three portions. The analysis showed that the milk was 88·03 water, and in the borough analyst's opinion there had been at least 10 per cent. of added water to the prejudice of the purchaser.—Defendant said he served the milk in the same condition as when received from the farmer.—Defendant said he had no warranty with the milk, and a fine of 20s. was inflicted.

A SYSTEMATIC SAMPLING OF LONDON MILK.

"It is proposed," says the *Cowkeeper and Dairyman's Journal*, "to make a systematic sampling of milk arriving at London termini by an organised method, which will enable any consignee, be he wholesale or retail, large or small dealer, to obtain at any journey a sample, or samples, at nominal cost. This scheme is being perfected, and will be in operation during the present month. The Dairy Trade Analysts, Messrs. Redwood and de Hailes, of 15, Red Lion-square, W.C., are to be entrusted with the analysis, which will engender confidence both in sender and receiver. A representative will be in attendance at the principal stations on stated days, from 4 a.m. till 12 noon. Anyone wishing to have samples taken at any time other than on the specified days can arrange for this by sending a post-card to J. H. Stacey, 57, Chancery-lane."

AN INTERESTING MILK TRADE REVELATION.

At Blackburn Police Court, on January 18, David Grimshaw, farmer, of Whitebirk, was summoned for a breach of the Food and Drugs Act. Mr. Withers prosecuted on behalf of the Corporation, and Mr. Read represented the defendant. It appeared that defendant supplied milk by contract to the Callow Park Dairy Company's at 8½d. per gallon, they retailing it at 1s. per gallon. On December 21 last Inspector F. Poole went to the Callow Park Dairy Company's premises, and saw the defendant empty a can containing 13 gallons of milk into a can belonging to the company. The inspector thereupon stepped forward and took a sample, and the certificate of analysis by Dr. Collingwood Williams showed that the total of 10·69 solids contained 1·34 fat and 9·35 other solids. The analyst was of opinion that upwards of one-half of its cream had been abstracted. In answer to Mr. Read, the inspector said he stirred the milk round with a jug before bottling the sample, and was of opinion that it was thoroughly mixed, even though the milk had been standing in defendant's kit five hours, and the cream had risen.—Dr. Wheatley, Medical Officer of Health, also considered that the tipping of the milk into another can would thoroughly mix it. He did not consider that the pooriness of the milk would be accounted for by its having no "afterings" in. Even without "afterings," milk should contain about 3 per cent. of fat. The fat was a little below the 3 per cent. in winter, but not near the figure of 1·34 mentioned in the certificate.—Mr. Read said that the inspector had frequently taken samples of milk from the defendant, and no fault could be found with it. This case had a perfectly natural explanation from the fact that the milk supplied to the Callow Park Company at this low price had no "afterings" in it. Though the defendant was not entitled to abstract any cream from the milk, he was justified, if he could, in obtaining

separate "milkings," and sending that which was not so good to the low-price contractor. The assumed abstraction of cream in this case was further accounted for by this being the depth of winter, when milk was naturally of a poor quality, and the fact that the cream had been rising for four hours, and was not thoroughly mixed with the milk when the inspector took the sample.—The Bench were clearly of opinion that there had been a breach of the Act, and imposed a fine of £5 and costs.

BUTTER.

At Marylebone, on January 15, John William Sach, carrying on business at 139, Praed-street, Paddington, was summoned by Thomas Parker on behalf of the Paddington Vestry for selling to the prejudice of the purchaser, butter which consisted of 90 per cent. of margarine.—The defendant pleaded guilty.—There was a previous conviction.—Mr. Curtis Bennett fined the defendant £10 with two guineas costs.

At the Wigan County Police Court, on January 15, a number of prosecutions under the Margarine Acts were heard. Joseph Littler, grocer, of Hindley-green, was charged with selling margarine as butter, and was fined £5 and costs.—Samuel Duncalf, of Bolton-road, Ashton, was fined £10 and costs for selling margarine as butter, and for not having the article properly labelled was ordered to pay costs, whilst for not having a firkin in another part of the shop labelled "margarine" he was fined 10s. and costs—in all £16 5s.—James Wood, of Bryn, for exposing margarine for sale without a label was fined £2 and costs, and for not wrapping it in paper marked "margarine" was ordered to pay costs.—Mr. Tom Ellis prosecuted on behalf of the Royal Lancashire Agricultural Society.

A CURIOUS BUTTER CASE.

In the Linlithgow Sheriff Court, on January 15, Mr. James Macdonald, S.S.C., made a statement to the effect that Mr. James Anderson, grocer, West Main-street, Armadale, was summoned to appear on Dec. 18 last, to answer a charge at the instance of Mr. John Frew, Inspector under the Food and Drugs Act, of having sold to the latter 1lb. of butter which was not of the nature, substance, and quality demanded, and that (according to an analysis by Dr. Readman, analyst for the burgh of Bathgate and the county of Linlithgow) it contained 40 per cent. of fat other than butter. Mr. Anderson did not appear to answer the charge on December 18, but he (Mr. Macdonald), on his behalf, asked a continuation of the case. His Lordship refused to continue the case, and granted a warrant for Mr. Anderson's apprehension. Mr. Allan, who acted for the prosecutor, did not put the warrant into force, but it was arranged by Mr. Allan and himself that the case should be heard that day. Mr. Anderson was there with witnesses, but he now found there was no

one to prosecute. He produced a certificate from Dr. Ivison Macadam, and also a certificate from Dr. King, F.C.S., showing that the butter was genuine. The butter was imported from Finland, and he also produced a certificate from the British Vice-Consul there, showing that there was no margarine manufactured in Finland.—The Sheriff: You have given me no proof that the butter analysed by Dr. Macadam and Dr. King was the same as that sold by Mr. Anderson to Mr. Frew and analysed by Dr. Readman, the county analyst.—Mr. Macdonald: No; but your Lordship will see that what I want is that one of the parts still in the possession of Mr. Frew, be sent to the Somerset House authorities, London, to be analysed.—The Sheriff: Well, if that were done, and their report showed that the butter was pure, the county authorities or Mr. Frew would have small chance of succeeding before me.

THE SANITARY CONDITION OF PROPERTY: A TEST CASE IN SALFORD.

At the Salford Police-court on January 15, a case of some importance with regard to the drainage of house property was heard by the Stipendiary Magistrate (Mr. Makinson). The Salford Corporation summoned Mr. John Wainwright to show cause why he should not be ordered to drain certain property in accordance with the directions of the Corporation. Mr. Evans, of the Town Clerk's Department, appeared in support of the summons, and Mr. Crompton represented the defendant.—Mr. Evans said the proceedings were taken under Section 19 of the Public Health Act, 1890, which had reference to the procedure with regard to nuisances caused by defective drains. Since the decision in the case of *Travis v. Uttley* (Law Reports, 1894), many owners had refused to repair the drains on their property, and difficulties had been of frequent occurrence in various parts of the country. The proceedings against the present defendant were taken as a test case. Last year another decision was given by the Lord Chief Justice and Mr. Justice Wills, which considerably strengthened the position of corporations. During the past six months the Salford Corporation had served notices on Mr. Wainwright with regard to the drainage of the houses Nos. 105 to 115, Sussex-street, Lower Broughton, which was defective, but he had failed to remedy the defects. He now asked that an order might be made requiring him to comply with the notices. Mr. Crompton admitted the defendant's liability, and consented to an order, provided no continuing penalties were imposed.—The Stipendiary Magistrate made an order, with the usual costs against the defendant.

MEAT.

CHARLES LATHOM, a "dealer," of Clifton, Biggles-wade, was summoned, at Clerkenwell, on January 16,

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A—1s. 6d. lb.; B—2s. lb.; C—2s. 6d. lb.; D—3s. lb.; E—4s. lb.

PURE CHINA. HT (1) 2s. lb. HT (2) 3s. 6d. lb

Packed in ½lb Bags, 1lb., 2lb., 3lb. and 5lb. Tins; in Boxes 10lbs. and 20lbs.; Half Chests 50lbs. and Chests 100lbs.

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by Inspector Billing, of the Holborn Board of Works, for depositing for sale at 93, Charterhouse-street, on October 30, a carcase of mutton, intended for the food of man, the same being unfit for human consumption. The evidence showed that the animal had died a natural death.

Defendant said that he had instructed the meat salesman in London not to sell the meat if it were unfit for food.

Mr. Horace Smith said this would not do. If defendant read the newspapers he would see that people were fined £20 and £30 for this offence.

Defendant said he could not read or write.

The magistrate imposed a fine of £20.

Defendant said he had neither money nor goods.

Mr. H. Smith: One month's imprisonment.

LEAD POISONING IN DERBYSHIRE.

THE CHESTERFIELD WATER ENGINEER IN A FIX.

THE following letter has been sent by the Derbyshire County Council to the Chesterfield Rural District Council. We shall be curious to see what reply, if any, Mr. Eaton can make in defence of his remarks respecting Dr. Barwise.

County Offices,
St. Mary's Gate, Derby,
January 15, 1897.

George Shaw, Esq.,
Clerk to Rural District Council, Chesterfield.

Dear Sir,—The Derbyshire County Council met on Wednesday, the 13th instant, and their attention was then called to remarks reported to have been made by your water engineer, Mr. Eaton, at a recent meeting of your authority, with reference to the results of analyses made by our county medical officer, Dr. Barwise, of water submitted to him by Dr. Mackintosh, for the purpose of ascertaining whether lead was present therein or not. As you are aware, Dr. Barwise reported that two samples analysed by him contained respectively 0·45 and 0·42 grains of lead per gallon. It appears from the papers that this report was called into question by Mr. Eaton, who stated that Dr. Barwise did not know what he was talking about, that his analysis was all wrong, that it was ridiculous to talk about 0·42 grains of lead per gallon, and that such a state of things did not exist. He went on to infer that Dr. Barwise had carried out his work in an amateurish manner, with the silly result arrived at.

Since these reported remarks of Mr. Eaton appeared in the public press, further portions of the same samples of water which had been examined by Dr. Barwise have been handed to Mr. White, the county analyst for Derbyshire, and to Dr. Bostock Hill, the county analyst for Warwickshire. The results of the three analyses of the samples of water submitted by Dr. Mackintosh are as follows:—

| | Sample No. 1. | | Sample No. 2. |
|------------------|---------------|-----|---------------|
| Dr. Barwise | ... 0·45 | ... | 0·42 |
| Mr. White | ... 0·45 | ... | 0·39 |
| Dr. Bostock Hill | 0·385 | ... | 0·39 |

It will thus be seen that Dr. Barwise's estimate, to which Mr. Eaton has taken exception, is confirmed to within 3·100ths of a grain, an almost inappreciable quantity.

In further confirmation of the above results two taps in your district were, on the 8th inst., sealed up by the County Sanitary Inspector, in the presence of Drs. Mackintosh and Meredith Richards, and on the following day the seals were broken and samples collected in duplicate by the same inspector in the presence of Dr. Richards. These samples were subsequently analysed by Mr. White, with the following results, viz.:—

Mr. Hewitt's tap at Holbrook, 0·30 grains per gallon.

Mr. Roberts' tap at Halfway, 0·42 grains per gallon.

Your Council will thus see that a week after Mr. Eaton's reported statement that such a result as 0·42 grains of lead per gallon was nonsense, the same quantity was again proved to be present in the water.

Under these circumstances the County Council very strongly resent Mr. Eaton's derogatory remarks concerning one of their officers, and at their meeting, held on Wednesday last, the following resolution was unanimously passed:—

"That the Clerk be instructed to communicate with the Chesterfield Rural District Council with reference to the statement made by their engineer, Mr. Eaton, at their last meeting, and to inform them of the results of the water analyses obtained by Dr. Bostock Hill and the County analyst, and that the District Council be asked to call upon Mr. Eaton to either substantiate or withdraw the statement made by him with reference to the County Medical Officer. And further, that a copy of such communication be sent to the Press."

In accordance with this resolution, I have already explained what has taken place in regard to the examination of the water submitted to Dr. Barwise, and I now ask that you will be good enough to bring this letter before your District Council at their next meeting. I have no doubt that your authority will comply with the request of the County Council contained in the latter part of their resolution, and when this has been done I shall be greatly obliged if you will let me know the result of your Council's communication to Mr. Eaton.

In accordance with the directions of my Council, I am forwarding a copy of this letter to the Press.

I am, yours faithfully,

N. J. HUGHES-HALLETT.

THE NEW TRANSVAAL ADULTERATION ACT.

THE new Adulteration of Foods Act has been published in the Transvaal, and came into force from the beginning of the year. It is provided that anyone offering for sale or selling adulterated foods or drinkables, shall be liable to a fine of £50 or six months' imprisonment. Anyone wilfully offering for sale, or selling, or keeping adulterated food or eatables shall be subject to a fine of £100 or twelve months' imprisonment. Adulterated articles may be summarily confiscated and destroyed without compensation. The Government has power to appoint inspectors where necessary. By adulteration is meant mixing or adding any substance injurious to health or for the purpose of increasing weight or reducing or concealing quality.

GINGER-BEER WITH 10 PER CENT. OF ALCOHOL.

AT Southwark, on January 13, the keeper of a beer-house was summoned for diluting beer.—Mr. Dennis prosecuted on behalf of the Excise, and stated that the dilution was 2·7 per cent.—Mr. Sydney, for the defence, said the only way in which the defendant could account for it was that a quantity of ginger ale had inadvertently been emptied into the cask. The defendant had been supplying "ginger ale hot" to a number of workmen, and about three gallons were left on hand, which, on being put into the beer, made the latter thick, thus necessitating extra finings being added.—The analyst from Somerset House, replying to Mr. Sydney, said he did not detect any ginger in the beer.—The defendant: Or spices?—The Analyst: No; I found no trace of spices.—In reply to other questions, the analyst stated that some samples of ginger ale and other temperance drinks contained plenty of alcohol. He had a prosecution in hand now where ginger beer contained the

enormous amount of 10 per cent. of alcohol. With regard to the present case, three gallons of ginger ale would not account for the total dilution.—Mr. Sydney pleaded in mitigation that the defendant had only a small house in a poor neighbourhood.—The magistrate imposed a fine of £15, including £7 16s. costs, and allowed time for payment.

MORE PARAFFIN WAX IN SWEETS.

AT Coventry, on January 7, James Rollason, confectioner, Victoria-street, was summoned for selling macaroons adulterated with $4\frac{1}{2}$ per cent. of paraffin wax. The analyst, Dr. Bostock Hill, reported that paraffin wax was a highly injurious ingredient to use in the manufacture of sweets, being absolutely indigestible. Defendant pleaded that he purchased the goods as pure from a wholesale agent in Birmingham. The agent, called by defendant, stated that since recent prosecutions in Birmingham, goods adulterated with paraffin wax had been withdrawn, but defendant received the macaroons three months ago. The Bench said they felt that the manufacturers were the real sinners in these cases, but the law threw the onus upon the seller. Defendant would have to pay 2s. 6d. fine and 11s. 6d. costs, and the analyst's fee 10s. 6d.—Elizabeth Hopkins, shopkeeper, Warwick-lane, had to pay expenses only for selling chocolate chumps adulterated with paraffin wax. It was stated that the Coventry manufacturer who sold the goods had no sleep the night he saw the analyst's certificate. The Town Clerk said a case had been reported where a child had died after eating sweets adulterated with paraffin wax.

THE INFLUENCE OF SURROUNDINGS.

(Concluded from page 46.)

WHETHER sewer air is responsible for spreading communicable diseases has not yet been satisfactorily answered, but this we know, that when the air of sewers or drains penetrates our houses, it causes an impaired state of bodily health, viz.: loss of appetite, lassitude, diarrhoea, and feverishness, and more or less anæmia; this can be easily understood when we consider the composition of the air of sewers. These gases drawn in by breathing, slowly but surely replace the oxygen conveyed by the lungs to the blood; in this sense, the particles or carriers of oxygen become, as it were paralysed, and thus unable to carry out their allotted task.

Now the nature of impure air varies considerably in sewers: if they are self-cleansing, there is little gas—the air in many sewers of London is not very impure, while in others, the emanations are most objectionable. I am of opinion that if the drains and sewers were to receive the attention after construction that is necessary for their safe working, we should not hear so much about sewer gas. Drains and sewers require frequent flushing, the more often, the better. Since the system of cleansing the streets by flushing with water has been adopted by the surveyor for the Strand District, the condition of the sewers has materially improved, so much so, that complaints are rarely made of smells from street ventilators, the water used in the washing of the streets thus serving two purposes, viz.: cleansing the streets and cleansing the sewers.

This improvement in the condition of the Strand sewers has not been brought about by extra ventilation; on the contrary, by the insertion of the interceptor trap in the house drains, the air has been more confined in the sewers. This goes to show that where these are flushed daily, foul gases cannot generate. Before this

system of flushing the roads and sewers, a staff of men were daily engaged in removing the deposit from the bottom of the sewers; at the present day they are in the condition just described.

Mr. Rogers Field, in a paper read before the Royal Institute of British Architects, said: "If sewers are properly constructed, properly flushed, and thoroughly ventilated, you will have practically no smell from them—no appreciable smell. Where you get the smell is where the sewers do not carry the foul matter away, where it remains and where it decomposes. It is, however, a great mistake to imagine that foul emanations come exclusively or principally from sewers; they come as much from defective house drains." I can thoroughly endorse those remarks as the result of observation and practical experience.

In approaching the question of the necessity of a dual system of ventilation I feel I am drifting into troubled waters, for this is now, and has been, the cause of much controversy; my own opinion is that sufficient reason has not been made and shown for the necessity of a separate system of ventilation.

The sewer should be treated as a portion of the house drain, and both combine in the one system of ventilation. This means, of course, the abolition of the interceptor trap, and the free passage of air through the sewers and house drains to an upcast ventilator terminating above the roof of each house. Providing the drain be laid on concrete and covered in concrete, with no openings into the drain from inside the house, no harm can possibly ensue, and again there would be no pressure on the traps of the water closet, because of the easy exit of the air through the upcast pipe. Moreover, if each house assists in this, the air in the sewer would be practically harmless because of its constant change.

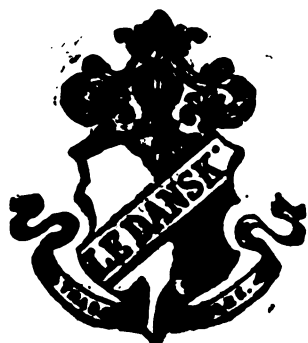
Mr. Parry Laws, in his report on the result of investigations on the micro-organism of sewage, says:—In sewer air, organisms rapidly liquefying gelatine were found to be practically absent, a fact impossible to explain on the assumption that sewer air is liable to take up bacteria from sewage. Dr. Arthur, of King's College, last year made some experiments on the air from some of the sewers of the Strand, and also in some taken from the main line sewer of the London County Council in the same district, but was unable to discover the presence of the bacillus of typhoid fever or diphtheria in the air taken from those sewers.

Typhoid fever has been attributed to emanations from sewers, and there is much evidence for and against the theory, but after reading through the evidence one seems completely in a fog; one fact, though, is staring us in the face, and that is, that since the sewerage of towns, typhoid fever has decreased about 50 per cent.; whether the result has been brought about by sewers must furnish food for thought to all interested in this subject.

Sewer men are not injured to any appreciable extent by working in sewers, nor is there any very strong evidence of enteric fever among those employed on sewage farms. Mr. Stokoe, the engineer in charge of the Northern Outfall Works at Barking, informs me that no case attributable to emanations from the sewers has occurred among the employés (about 200), and the men are continually in and out of the sewers and settling tanks; stronger evidence seems to be forthcoming pointing to the water and milk supply as the more likely agents of enteric fever.

In conclusion, let me say that the more air and water you get into the drains and sewers the better, and less dangerous they become, and the remedies that should be applied in the present day, are: more surface ventilators for the sewer, flush frequently, abolish the interceptor traps, and let every house assist in the ventilation of the sewer which it assists to foul. Providing the drain is sound, and laid as before described there can be no danger, while the advantages are obvious.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, FEBRUARY 6TH, 1897.

MURDEROUS REFUSE AMERICAN OILS.

WE welcome a recruit to the cause of truth in the *Daily Chronicle* of January 28. Our contemporary says:—

"But another subject of the gravest importance is that of the lamp accidents, which account for many deaths. We are afraid that there has been a blunder in this matter. The American oil trusts send us oil cheap, and, it is alleged, proportionately risky. Our experts have been persuaded, even at Spring Gardens, to take little care about the flashing point of oil, and to have turned all their energies to the laudable, but almost hopeless, task of reforming the public fancy as to lamps.

We suggest that it is worth considering whether a higher standard of safety in petroleum would not lessen the loss of life."

We congratulate our contemporary for thus directing attention to the extraordinary behaviour of those County Council officials who for the past few years have been so industriously attending coroners' inquests and disseminating the dangerous lie that the explosions have been caused by cheap lamps. It is the opinion of all investigators who have thoroughly studied this question, and who are not in the pay of the American oil gang of contrivers of murder and arson, that this movement to throw upon the lamps the blame of the explosions and roasting alive of so many hundreds of people of the United Kingdom, and its attendant enormous loss of property by fire, was directly prompted by the American oil gang, and has been worked solely in their interests for the purpose of suppressing the truth that these explosions in reality are caused by the 73 deg. flash-point, fixed upon the advice of Professor Abel under circumstances which certainly necessitate a severe investigation.

Let it be clearly understood that the experts appointed by Government to decide what was a safe flash-point for petroleum, namely, Dr. Letheby and Professor Atfield, were in accord with Professor Abel, and agreed unanimously that the flash-point should be 100 deg. Fah. How it came about that Professor Abel suddenly and in defiance of the protests of his colleagues, had the effrontery to give the pernicious advice to Sir J. Fergusson that 73 deg. was a safe flash-point, and why Sir J. Fergusson adopted that flash-point and engineered the legislation responsible for this frightful holocaust of human life, is a matter which, in the public interest, ought to be thoroughly probed. That it needs probing may be readily seen when the sinister fact is taken into consideration that the American oil refiners themselves have admitted that 40 per cent. of their entire output was of too wretched and unsafe a character to be permitted to be sold in any portion of the United States, and that they had to find an output for this refuse oil or suffer a loss to this extent. Such being the case, it was a portion of the game of the American Trust, controlling a greater amount of capital than any mercantile combination in existence, to secure a dumping-ground for this 40 per cent. of murderous refuse oil; they have secured it in England, and it ought to be the business of some fearless champion of truth in our daily press to demand, as we have said, a thorough investigation into the methods by which the American oil gang have secured the dumping down into this country of rubbish which is responsible for the sacrifice, it is computed, of one life per day and the loss of an enormous sum of money by fires.

It ought also to be the business of the London County Council to probe to the bottom the reasons why its officials are attending coroners' courts and industriously spreading these lies that cheap lamps are the cause of the explosions. No lamp is safe with the 73 deg. murderous refuse American oil, but even with the cheapest lamps, if used with oil flashing at from 100 to 120 deg. Fah.—such as, even in "corrupt America," as it is so often termed, is demanded for the public safety in every State in the Union—the danger of loss of life by explosion is practically nil.

The absurdity of the 73 deg. flash point is evident when we take the number of days per year during which the ordinary temperature has been above 73 deg. Fah. The Chambers of Commerce of Manchester, Glasgow, and Edinburgh, and various chemical societies have strongly condemned it as dangerous to life and property. The leading insurance offices of Edinburgh and Glasgow, on January 20, 1894, made experiments with these dangerous American oils, and they found that some of this oil flashed at 69 deg. Fah., and when heated to 88 deg. Fah.—a heat naturally often exceeded in living rooms in which lamps have been burning con-

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tinuously for some hours—that a lighted match thrown into such oil started an instantaneous blaze, whilst lighted matches thrown into oils flashing from 100 to 120 deg. Fah. were extinguished. No matter what County Council alleged experts, with their ridiculous experiments with lamps may testify, and no matter what that farcical Lamp Commission of the *Lancet* may report, the talk about cheap lamps is simply a deliberate attempt to lead the public from an appreciation of the real question, which is, that these explosions, deaths and fires are due, not to cheap lamps, but to murderous American refuse oils.

The *Daily Chronicle* has deserved well in many things of the people of London; it would deserve still better if it had an independent investigation made in the public interest into this very grave question. It has been the business of the American oil gang, by an enormous expenditure of money, and by the most colossal lying, for years to mislead public opinion in England and deceive the Press upon this question so that they might continue to send in their 40 per cent. of refuse oils to this country. However great their monopoly, and however enormous the millions at their command, this is a question in which truth and the preservation of so many hundreds of people from being roasted alive yearly should have every opportunity of being known, and it is only by enlightened action and investigation by widely-read journals such as the *Chronicle* that these things can be put in a true light before the public. All who have independently investigated this question have regretted the apathy which the entire Press of the country has hitherto manifested upon a matter of real public danger.

FOOD ADULTERATION LEGISLATION.

TIME has fallen into the habit of justifying our contention. When we protested against a question such as pure food being entrusted to a political hack on the make like Mr. T. W. Russell, we knew the man, his record, and the gelatinous nature of his principles as contrasted with the adamant nature of his self-seeking. But in this Mr. Russell is only one of a very nauseating type, the professional wind-bag or political swashbuckler, of whom public life, unhappily for the public welfare, contains too many awful examples, from the Curzons to the Asquiths, to the Russells and Silomos. The result is that we have to record debates like that on another page, and to chronicle the net results, "Blatherumskite and bunkum." And this we suppose is what our Balfours and the rest consider governing a country and safeguarding its interests. Heaven help the "puir daft bodies"!

MARGARINE.

ARTHUR JOHN TREADWELL, of Allen-road, South Hornsey, was summoned by Mr. Arthur Liddell Bridge, Inspector of Weights and Measures under the Middlesex County Council, for exposing for sale a parcel of margarine without its being properly labelled as required by the Margarine Act. The defendant admitted that the label had accidentally slipped, and denied that he had designedly kept the label off. Mr. Paul Taylor accepted this, and fined him only 5s., with 12s. 6d. costs.

BUTTER.

At Liverpool, on January 15, Ernest Harding, grocer, Dog and Gun Village, West Derby, was fined 10s. and costs for having sold as butter a mixture containing 10½ per cent. of water and 65 per cent. of fats other than butter.

At Highgate, on January 18, George Moore, of 57, Turnpike-lane, Hornsey, was summoned for selling butter adulterated with 80 per cent. of foreign fat, and for exposing margarine for sale unlabelled.—The sample was taken by Inspector Bridge, Middlesex County Council, and turned out to be margarine, and therefore should have been labelled "margarine" in the shop.—Defendant was fined 20s., and 19s. 6d. costs.

ADULTERATED MILK.

A NOVEL EXPLANATION—LETTING IN THE AIR.

MUCH misplaced ingenuity is expended by dairymen to account for the presence of more than the usual quantity of water in the milk they vend. Mr. Charles Nicholls, of Sunbury, gave a novel explanation of how this happens. It is all through the anxiety of railway porters to keep the milk fresh and cool. Sometimes the large milk cans are left on a station platform all night, and in order to preserve the fluid fresh and cool the porters remove the lids to let the air in. This also lets the rain in when the weather is wet, which causes the milk to swell, and intermeddling analysts to find water in it. One witness who was called for the defence corroborated this explanation, mentioning that one can originally containing fourteen gallons was, after standing uncovered on the platform all night, found to have sixteen gallons of fluid. There must have been a terrible rainstorm that night! "But, bless me, gentlemen," said the dairyman to the magistrates, "a drop of clear water doesn't hurt anybody." The real question, however, is, "Does it do any particular good when paid for at the rate of unskimmed milk?" A Justice of the Peace suggested that if the milk cans are to be left uncovered on open platforms all night they ought to be provided with umbrellas to keep them dry, and, to show dairymen that such an expenditure would be cheaper in the long run than the payment of fines, the Bench ordered Mr. Nicholls to disburse 20s. and costs.

MILK APPEAL FROM BRADFORD.

IN the Queen's Bench Division, on January 22, before Mr. Justice Wright and Mr. Justice Bruce, sitting as a Divisional Court, the case of Rhodes v. Raistrick was heard. The question for the Court arose on a case stated by the Bradford magistrates, and Mr. MacMorran, Q.C., for the appellant, said the defendant and respondent was summoned under the Sale of Food and Drugs Act of 1875, for selling milk not of a proper standard of purity, and the facts as stated upon the hearing of the information were that Rhodes on August 19, 1896, purchased of Raistrick 1½d. worth of milk. Rhodes intimated that it was bought for the purpose of analysis. The analysis was duly made by the proper officer, who, in a detailed report, arrived at

the conclusion that 10 per cent. of water had been added, and 10 per cent. of cream extracted. At the time of the examination no change had taken place in the constitution of the article to alter the analysis. At the hearing of the summons it appeared that the respondent was not represented by a lawyer, but he, without calling evidence, informed the Bench that the milk, so far from being adulterated, was exactly as it came from the cow. He kept ten cows, and had fed them properly. The magistrates held the certificate of the analyst to be void, and having regard to the dryness of the summer and the want of herbage, they considered it unlikely that rich milk would be obtained. The percentage of ingredients, they added, did not necessarily show that the milk was adulterated. They were also of opinion that the charge was trifling, and it was not expedient to convict. It was now contended by the appellant that in the absence of evidence from the respondent the magistrates ought to have fully accepted the certificate.—Their Lordships, however, at once decided that the question was one of fact for the magistrates, and dismissed the appeal, with costs.

MILK FOR THE PATIENTS.

AT the Liverpool City Police-court on January 20, before Mr. Stewart, Charles Baldwin, Park Stile Farm, West Derby, was summoned for supplying milk which had been deprived of part of its cream.—Mr. Cripps prosecuted, and Mr. Rudd appeared for the defence.

Inspector Baker said that on the morning of December 31 he went to the hospital, Priory-road, Anfield, and there saw the defendant's assistant deliver milk to the hospital. He took a sample and gave the usual notice, offering to divide the milk into three parts and leave one. The offer was accepted. He took a sample to the public analyst, who certified that the sample contained the parts as under:—2·54 per cent. of fat, 8·76 of other solids, 11·30 of total solids, and that it had been deprived of part of the cream. Genuine milk contained at least 3 per cent. of fat.

Mr. Rudd cross-examined Inspector Baker, who said he had taken about thirty samples of the milk supplied by the defendant to the hospital, and that the certificates showed, after analysis, that there was nothing the matter with it, and that it was genuine.

Mr. Rudd pointed out that the defendant had given every satisfaction to the hospital authorities with regard to the milk he supplied. He supplied some of the hospitals for three years, and had been invited to tender for the supply of milk to two other hospitals.

The defendant and one of his servants gave evidence to show that the milk was delivered at the hospital in the same condition as it came from the cows. It was not adulterated in any shape or form, and never was taken into the house, but taken in a cart direct from the shippon to the hospital.

Miss Thomas, matron of the Priory-road Hospital, said the defendant had supplied milk to the hospital since April last. The milk had given every satisfaction. It had been daily tested by the test of the Corporation, and an entry as to its proportion of cream recorded in a book provided. The book was sent to the medical officer for his inspection. On the day in question the entry showed that the milk had eight degrees of cream.

Mr. Rudd said their contract with the Corporation was that there should be eight degrees of cream. He pointed out that, according to the entries, there never had been less than eight degrees of cream, but frequently more.

Mr. Stewart commented on the certificate given by Dr. Campbell Brown, and remarked that the medical officer of health was the prosecutor in the case. The authorities of the hospital appeared to be satisfied with the milk from their own tests. Dr. Campbell Brown's test was a different one. Dr. Campbell Brown

said the milk ought to have had 3 per cent., whereas it had only 2·54, and was short of ·46 per cent. He did not say there was any evidence of any fraud in the matter. He would impose a fine of 1s. and 15s. costs.

ADULTERATED MILK IN PRESTON.

AT the Preston Police Court on January 22, John Salt-house, of Churchhouse Farm, Grimsargh, was summoned for selling adulterated milk.—Mr. Hamer (Town Clerk) appeared to prosecute, and Mr. Blackhurst defended.—William Sharpe, employed in the sanitary office of the Corporation, said that on December 8 he received instructions from Inspector Marsden to purchase a pint of milk from Salthouse, who was in charge of a milk cart in Chester-road. He asked for new milk, and tendered 1½d. in payment. He told defendant that the milk was for the purpose of analysis.—The certificate of the public analyst showed that the sample forwarded contained upwards of 35 per cent. of added water.—The Town Clerk pointed out that defendant was liable to a penalty not exceeding £20.—Mr. Blackhurst said defendant had been in the habit of bringing milk to Preston for a number of years. This was the first time any complaints had been made respecting the quality of the milk supplied. Defendant was in poor circumstances, and his farm was one of the poorest in the neighbourhood. He was not in a position to "provin" well, and he was informed that cattle did not give as good milk when fed in the stalls as when out on grass.—The Bench imposed a fine of 40s. and costs, in default one month's imprisonment.

GROGER AND INSPECTOR.

EXTRAORDINARY DEFENCE IN A MARGARINE CASE.

PROBABLY one of the most remarkable defences ever heard of in prosecutions under the Margarine Act was unfolded at the Leeds Town Hall on January 21, when Michael Maloney, provision dealer, of 26, Lady-lane, Leeds, was summoned before the Leeds Stipendiary Magistrate (Mr. Atkinson). The charge was that he had exposed for sale by retail in his shop a parcel of margarine, there not being attached thereto a label "Margarine," in printed capital letters 1½in. square; also that he had supplied the same to Inspector Walker in a paper on which there was not printed "Margarine" in letters ½in. square.—The Town Clerk (Mr. Harrison) prosecuted, and Mr. H. A. Child defended.

Under the direction of the inspector, William Gill visited the defendant's shop on December 5, and asked for a pound of butter without salt. The defendant, he said, supplied it from a white dish on the counter, and witness paid 1s. for it. Someone in the shop—he thought the defendant's daughter—observed: "That's Jews' butter;" and he replied: "It's all right." There was no label on the butter, or on the wrapper. Having got the butter, witness made a sign to Inspector Walker, who was on the other side of the street, and he came in and told defendant the butter was purchased for analysis.—Cross-examined by Mr. Child: Do you hunt in couples when you go margarine-purchasing? Yes.—Then this had been pre-arranged? Yes.—Did you point to this particular lot? I did.—Mr. Atkinson: How did you know that was butter without salt.—Witness: I had been there before, watching; and I had seen the Jews supplied with it.—The Inspector, cross-examined by Mr. Child, intimated that in his experience the Jews generally saw that they got value for their money.—The defendant, on going into the witness-box, said he had been in this business thirty years, and, excepting a summons in 1893, which was dismissed, this was the first time he had been in a police-court. He never exposed margarine by retail in his shop. The only margarine he had he sold wholesale to bakers.

He had no margarine in his shop to his knowledge, and did not remember selling to Gill. His impression was that Gill had walked into the shop with the package of butter.—Cross-examined, defendant swore that he sold Gill nothing that particular night. The first time he saw him was when he walked into the shop.—Mr. Atkinson said he should unhesitatingly refuse to accept the view that the butter was fraudulently introduced into the shop by the Inspector and Gill.—The Town Clerk here intimated that he would withdraw the second charge, and rely upon the one relating to the exposure of the margarine for sale without a label.—Mr. Atkinson observed that the position had been aggravated by the attitude which the defendant had thought fit to assume in the witness-box. In view of that attitude he could not come to any conclusion but that the defendant was conscious of the fraud practised on the public. He must, therefore, order him to pay a fine of £3 and costs, or go to prison for one month.

DISEASED PIG.

CHARLES ELLIS ROOKE, pig dealer, of Willingham, Cambridge, was summoned on the 24th ult. at the Guildhall, London, at the instance of the Commissioners of Sewers, for sending the carcase of a pig, which was diseased, to the Central Meat Market, intending it for sale as human food.—Mr. Vickery prosecuted.—The defendant sent two carcasses to a salesman in the market; one was good, but the other was in a very bad condition. A note was enclosed with the meat, to the effect that if the meat was not good enough for human consumption it would do for cat's-meat. This was, Mr. Vickery said, merely an attempt to shift the responsibility off his shoulders. The defendant must have known that it was unfit for food.—Dr. W. Sedgewick Saunders, Medical Officer of Health for the City, said he had examined the carcase of a boar pig that had been seized. It belonged to an animal that had suffered from an inflammatory disease. He had also made a microscopical examination and found that there was great evidence of tuberculous matter. The eating of such meat would be highly dangerous to health.—Superintendent Burroughs, of the Cambridge-shire Police, said the defendant contracted to drive the mails, and he was also a pig dealer. Witness served the summons on him, and he made a statement to the effect that he had bought the two pigs for £3 7s. 6d. He had them killed and sent to London. He knew the boar pig was a bit yellow, and that was why he sent the note with it; it was the fault of the dressing. The defendant was in a small way of business.—The farmer who sold the defendant the pigs said he considered they were healthy. He had not calculated at what rate per pound he had sold them.—Mr. Vickery informed him that it worked out to 3d. a pound, and elicited from him the answer that prime pork fetched 3s. 6d. per stone.—Defendant gave evidence, and said he did not think the meat was bad. He admitted that he had other meat condemned. He had killed

thousands of pigs.—The Alderman said it was a bad case, and fined him £30 and costs £3 3s., or two months' imprisonment.

UNFIT FOOD AT DONCASTER.

At the Doncaster Borough Police-court, on Jan. 28, Thos. Brookfield, cattle dealer, Tickhill, and Herbert White, butcher, Doncaster, were summoned, the former for being the owner of a carcase unfit for food, and the latter for having the carcase deposited in his shop in the Shambles, Doncaster, when unfit for food. Mr. Sugden, Town Clerk, appeared in support of the prosecution, and Mr. Tovey, solicitor, represented the defendants. It was stated that on Thursday, January 7, Detective-Sergeant Clayton saw Brookfield driving to the shambles the carcase of a beast, which was placed in White's shop. Not liking the liking the look of the meat, the officer fetched John Sellers, the meat inspector, to examine it. Sellers ordered its removal to the slaughter-house, where it was subsequently examined by Dr. Mitchell-Wilson, who pronounced it as being unfit for food. By order of the magistrates the meat was destroyed. Brookfield, being seen and spoken to by the inspector, admitted that he was the owner of the beast. The defence was that the beast did not belong to Brookfield, but that it belonged to John M'Intosh, of Tickhill. It was stated that the meat, when sold, was perfectly right, but that, when in the rain at Doncaster, it got sodden. On arriving in the market they said they sent for the meat inspector, who was then apparently being fetched by the police officer. It was stated that the carcase was not going to the slaughter-house to be dressed, it was dressed. Witnesses for the defence said they did not hear the market inspector say, "Why do you bring such stuff as that into the market?"—The case lasted about two hours.—Fined £5 each, and costs.

SPIRITS.

At the Westminster Police-court, on Tuesday, Jan. 26, before Mr. Marsham, William Weston, wine and spirit merchant, of 111, Buckingham Palace-road, was summoned at the instance of St. George's, Hanover Square, Vestry, for selling whisky 27.59° under proof, being 2.59° below the legal standard of 25°. Mr. S. Hitchens, solicitor, prosecuted on behalf of the Vestry, and the public analyst's certificate was produced. John W. Whipp, assistant sanitary inspector to the Vestry, stated that on Dec. 3, 1896, he visited Mr. Weston's shop and asked for a bottle of whisky: the manager, who was behind the counter, said: "Will you have Scotch, or Irish?" The Inspector replied, "Scotch," the price paid being three shillings. After the purchase was completed, the Inspector informed the manager that he had purchased the whisky for the purpose of having it analysed by the public analyst, and the offer to divide the sample was accepted. Cross-examined by the defending solicitor the Inspector stated that he did not observe any notice in the shop, neither was his attention directed to any notice. Photographs of a

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certain part of the shop were produced, showing the position the notice was hung up, and the notice also was handed in. These productions were examined by the magistrate. The defence was that the vendor was protected by the notice hung up in the shop. The Magistrate stated that the inspector's attention was not called to the notice in question, and there being no label on the bottle to the effect that the whisky was not of the standard required by the Act, there would be a conviction. The defendant was fined £5, and two shillings costs.

MORE PARAFFIN WAX IN SWEETS.

At Coventry, on Jan. 23, John Upton and John Ingram, both of Gilbert-street, were summoned for selling sweets adulterated with paraffin wax.—The analyst certified that paraffin wax was absolutely indigestible and injurious to health. Mrs. Upton produced a box containing similar sweets to those analysed bearing the words "Guaranteed free from wax: healthful and nutritious."—The Bench asked if the wholesale manufacturers could not be summoned, but the Town Clerk stated that the wholesale dealers would not sell to sanitary inspectors, and could not be compelled by Act to sell.—In the result the Bench ordered each defendant to pay £1 4s. 6d., and the defendants were advised to proceed against the wholesale manufacturers.

SANITARY INSPECTORS' ASSOCIATION.

THE next general meeting of the members of the Sanitary Inspectors' Association will be held at Carpenters' Hall, London Wall, E.C., on Saturday, Feb. 6, 1897, at 6 p.m., when the following business will be considered:—

1. Minutes of the previous general meeting.
2. Election of members and associates.
3. To receive the nomination of R. N. Hartley, Esq., Yorkshire College, Leeds, by the council as an honorary member, and to ballot for his election.
4. To receive the nomination of John Milson Rhodes, Esq., Didsbury, by the Council as an honorary member, and to ballot for his election.
5. Paper on "Practical meat inspection," by Mr. G. B. Billing, meat inspector, Holborn Board of Works.
6. General business, after which the usual conference will be held.

ARRANGEMENTS FOR THE SEASON 1897.

Feb. 6, "Practical meat inspection," by Mr. G. B. Billing, meat inspector, Holborn Board of Works. Carpenters' Hall, 6 p.m.

March 6, Annual dinner, Venetian Chambers, Holborn Restaurant.

April 3, Paper by Dr. M. A. Adams, F.R.C.S., F.G.S., etc., M.O.H. Maidstone U.D.C. Carpenters' Hall, 6 p.m.

May 1, "Some nuisances from certain offensive trades, and methods of abatement," by Mr. T. W. Crocker (West Ham). Carpenters' Hall, 6 p.m.

THE AGRICULTURAL UNION CONDEMNS MR. RUSSELL.

The following circular, signed by the secretary of the National Agricultural Union, has been forwarded to all members of the agricultural party in the House of Commons:—

"I am directed by the Parliamentary Committee of my Council to respectfully call the attention of those members of the House of Commons who promised to support the programme of the National Agricultural Union to the urgent necessity which exists for prompt and effective legislation on the adulteration of food, and to express their hope that you will use your influence with Her Majesty's Government to induce them to take action during the present Session in the direction of the recommendations of the Adulteration of Foods Committee."

HACKNEY PUBLIC ANALYST'S REPORT.

MR. LEO TAYLOR, F.I.C., public analyst, presented his report, from which it appeared that, acting under the instructions of the Vestry, an increased number of samples had been submitted during the past quarter, the total number reported upon being 64, and included 34 samples of milk, six of butter, and five of whisky. The milks were decidedly better, but two were suspiciously poor. The butters were decidedly bad, three of the six were heavily adulterated, and one of the others was very nearly condemned. The spirits and drugs were all genuine, but in some cases the vendors were sailing very close to the dividing line, and only received the benefit of the doubt. The offences under the Acts were in the cases of milk 10 in number, of butter three, and of margarine two.

FOOD ADULTERATION AND THE GOVERNMENT.

IN the House of Commons on January 25, Mr. Kearley (Devonport) moved as an amendment to the Address:—"And we humbly represent to your Majesty our regret that your Majesty's advisers have expressed no intention of promoting legislation in furtherance of the Report of the Select Committee on Food Products, which disclosed the existence of unfair and nefarious competition with native food producers by foreigners and others, to the great detriment both of the commercial and agricultural interest of the people of the United Kingdom." The Government could not complain that this question was suddenly sprung upon them. The urgency of legislation to stop the adulteration of imported food had been pressed upon them and their predecessors in office during the past four years; and yet not a word on the subject was to be found in the Queen's Speech. There was a promise in the Queen's Speech to introduce a Bill to improve the water supply of the Metropolis, but he was sure the purity of the food supply of the metropolis was even more urgent. It was shown from samples taken of all kinds of articles that the percentage of adulteration had increased from 10.8 in 1888 to 12.9 in 1893, and in London it was 17.11 per cent. The most adulterated articles were, of course, milk and butter, and the returns supplied to the committee showed that 25 per cent. of the milk sold in the metropolis was adulterated. It was estimated that Londoners paid annually for water sold under the guise of milk no less a sum than £1,500,000 sterling. Butter was found to be adulterated in the metropolis to the extent of 20 per cent. These figures were very serious indeed, and he would urge that the administration of the present Acts by the local authorities should be made compulsory instead of permissive. The amount of adulteration was proved to be in direct ratio to the manner in which the Acts were administered. In many places at present the Acts were entirely disregarded by the local authorities, and not one single sample was taken in the course of the year. In such places the percentage of adulteration was high. Where samples were regularly taken, however, and the Acts well administered, as in Manchester and Salford, the percentage of adulteration was very low. He argued that when falsified food products were brought into this country they should be seized, and, if necessary, confiscated. The Government had done something in the way of taking samples at the port of entry; for example, 100 samples of shipments coming from Germany were tested, and no less than 30 were found to be falsified. These goods, however, were not seized, and he understood that it was argued by the law officers that the Government had no power to seize or confiscate until the adulterated or falsified articles were sold. Surely this was an anomaly. Traders were much harassed by the conflicting judgments of magistrates as to the use of "preservatives," some holding that to put them in food was adulteration, and others that it was not. Legislation was also necessary establishing a court of reference as to the

standard of purity for food. The matter was urgent and legislation should not be hung up and indefinitely delayed. There was practical unanimity on the main points of the question, and those they differed about could be settled in a few days.

Mr. Jeffreys (Hants, Basingstoke) seconded the amendment because he thought some amendment of the Food and Drugs Act was necessary for the protection not only of purchasers of agricultural but of other produce. The matter was most important to the agricultural world because so many agricultural products were adulterated, and thereby the farmer was undersold. The County Councils, with their analysts, did not seem to care to put the Food and Drugs Act in force, and a great many cases of adulteration escaped notice altogether. Frequently the analyst at Somerset House was at variance with the county analyst. A Board of Reference was needed to whom all differences should be left. A great deal of margarine was mixed with butter which was sold as pure butter, and much margarine was coloured like butter and sold as butter. The law should enact that margarine should be sold in its natural colour. The Central Chamber of Agriculture had unanimously passed a resolution urging the Government to legislate in the matter, and, seeing its importance not only to the commercial but to the agricultural community, he trusted they would do so without delay. (Hear, hear.)

Mr. M. Healy (Cork) said the subject before the House was of great importance to Ireland, whose well-being depended so largely on agriculture. The adulteration of butter was of much importance in the South of Ireland. There was probably no city in the world in which the butter trade was of so much commercial importance as the City of Cork, which he had the honour to represent. For the past two years the trustees of the Cork Butter Market had been in a state of the utmost perplexity and embarrassment, owing to the failure of that House to deal with the questions raised in the report of the Food Products Committee. It was a subject of great complaint that, in regard to a matter so vitally affecting Irish agriculture as the butter trade, that House did not set itself in motion to end the deadlock which had arisen in that trade by reason of the differences in the operation of the Food Adulteration Acts in England and in Ireland. They asked that some legislative conclusion should be given to the committee's report, and that something should be done to save the Irish butter trade from practical extinction. In view of the serious foreign competition to which Irish agriculturists were subject the Government were bound to ask Parliament to devote some of its time to legislation on this important subject. (Hear, hear.)

Mr. Radcliffe Cooke (Hereford) thought that the hon. member for South Tyrone, who had been chairman of the important Select Committee on Food Adulteration, would not fail to express his approval of the recommendations of that committee, although that committee had designedly omitted from their report any reference to certain contentious matters. The recommendations had evidently been drawn up with the view of facilitating the working of the machinery of the existing law. He expected that his hon. friend the member for South Tyrone would lay some stress upon the difficulty of establishing a standard of purity. In his view, a small measure, such as that which the Government were asked to bring in on this subject, would be of far more real benefit to the community than one which might affect the fate of Ministry. (Hear, hear.) He was sure that if Her Majesty's Government were to introduce a Bill dealing with this question, and based on the recommendations of the committee, it would receive careful consideration from both sides of the House. (Hear, hear.)

Mr. T. W. Russell (Tyrone, S.) said that he was not in the least degree disposed to minimise the importance of this question, because no one could have

sat upon the committee which had been referred to without being impressed by the deep interest which was taken in the subject by large sections of the community, and he could assure hon. members that he should deem it his duty to draw the serious attention of the Government to this matter. (Hear, hear.) The real question before the House, however, was not whether legislation on this subject ought to take place, but whether or not it should take place at once. The Select Committee in question was appointed some three years ago by the right hon. member for Wolverhampton, and it reported in August last. The report covered 50 pages, and dealt with a mass of detail which was seldom found in the report of any Select Committee. He might also say that the report dealt with matters of a most contentious character. The question, therefore, was whether in these circumstances Parliament was bound in January to legislate upon this subject in priority to any other. The hon. member who had brought the matter before the House had stated that a measure dealing with it would pass without difficulty, but he himself had some doubts upon that point. (Hear, hear.) It was quite true that the question did not involve any party interest, and that it did not divide the two sides of the House, but some of the recommendations of the committee certainly did raise questions of importance between the towns and the country. "No." Anyone who had sat upon the committee or who had looked at its division lists would know that in the divisions the representatives of the large cities voted one way and the representatives of the agricultural districts voted the other upon many of the issues that were raised before them. Let him take the question of purity standard. It was impossible to get magistrates or other authorities to agree upon such a standard, and unless such a standard were to be established all legislation on the subject must fail. The committee recommended that such a standard should not be set up by Act of Parliament, but that it should be established by a board of reference which should consist of men selected from the mercantile community, and that their standard should be made to have the effect of law by Order in Council. He had merely to state that fact in order to show the enormous difficulty which the matter involved. Take the question of milk. Let them assume that the board of reference sent out a standard of 3 per cent. of fat in the case of milk and that that was legalised. Much of the milk sold now contained more than 3 per cent. of fat, and although they would bring the adulterated milk up to 3 per cent. they would offer an inducement to those who sold better milk to work down to what was the legal standard. The hon. gentleman maintained that many local authorities would not put the Act as it stood into operation, but he did not indicate how the difficulty could be met. What was the whole trend of our legislation? It was to trust the local authorities of the country, and to cast upon local authorities the responsibilities that were taken by central authorities. In the committee it was proposed that the Local Government Board should have the power to take samples in all the places where the local authority failed to do their duty and to prosecute; but he could tell the hon. gentleman that that the Local Government Board, overweighted as they now were, were not prepared to do.

Mr. Kearley remarked that what he had suggested was that the duty should be made compulsory so far as the local authorities were concerned.

Mr. T. W. Russell admitted that in some cases the local authorities failed to act. That fact only emphasized the demand he made for time to consider a question so full of difficulties. There was only one other matter to which he wished to refer. The committee, against his draft report, carried an amendment which prohibited the colouring of margarine and the mixture of margarine with butter. That proposal was strongly resisted by all the representatives of the great

towns on the committee, and he had been informed at the Local Government Board by a deputation that to carry that out meant the total destruction of the margarine trade. He did not wish it to be understood that he was arguing against the recommendations of the committee; he was simply trying to show that so far from this being a non-contentious matter it was full of contention, and contention of the most difficult kind—that between town and country. Having dealt with the merits of the question he came to what the hon. gentleman would probably think of greater importance. During the recess a draft Bill was prepared. It had been carefully considered and was now being so considered, and all he could say was that the whole question was receiving almost daily consideration at the Local Government Board. They were trying to get over the difficulties, and he hoped that at no distant date the Government would be able to submit a Bill to the House dealing with the entire question. ("This Session?") That was not a question for him, but one which must be put to the leader of the House. He hoped, however, that in view of the statement he had just made the hon. member would not think it right to take a division.

Sir W. Foster (Derby, Ilkeston), was glad to hear from his hon. friend that a Bill on this subject had been drafted, and that it rested with the leader of the Government in this House to tell them later on whether they were likely to see the Bill this Session. He hoped that in this instance time would permit a Bill to be submitted to the House this year. In the interest of public work it was desirable that the fruits of a committee's labour should not be delayed too long. He did not believe that the difficulties in this case were as great as his hon. friend supposed. (Hear, hear.) The fact was that the legislation required on this subject was rather legislation, not for altering the principle of the law, but for improving the administration of the law, for improving the machinery by which the law was carried out. The Local Government Board thought there ought to be one sample of food taken for every thousand people in a district. That was not a high standard to be aimed at. In some places a sample was taken for every 300 people, but in some counties only one sample was taken for every 15,000 inhabitants, showing an almost total neglect of the law as it stood. The consequence was that in those localities adulteration went on, with injury to the home producer and general injury to the health and well-being of the people. The Secretary to the Local Government Board spoke about centralisation. Centralisation was not wanted in the direction of making the Local Government Board an active intervener in the detection of adulteration, but it would be a great help even to the largest and most advanced centres of local government if there were some body in London, such as a central board of reference, to whom there could be resort for assistance. Therefore, when the committee suggested the creation of a scientific body, which would be a source of strength to any local body trying to administer the Act, he thought the recommendation was such as to warrant some more definite promise than they had yet received from the Government. The Birmingham City Council were required to make up their minds as to whether the unlimited use of antiseptics in the treatment of various articles of food was injurious to health or not, and they resolved, after obtaining all the information they could, to refer to a body in London—that was the Government in London—for information as to how they were to proceed with reference to the introduction of antiseptics in the preservation of food-stuffs. At present there was no authority to whom they could appeal. That was certainly a flaw in our existing local arrangements, and until such a body was constituted they could not expect the law to be efficiently carried out. In the absence of such a body, too, they could

never expect uniformity of judgment on the Bench in cases of adulteration, and he was confident that if there were such a central authority to refer to the law would be enforced in many districts where it was now neglected. The hon. member for South Tyrone, while approving of the principle, spoke of the difficulties of setting up standards in regard to certain articles of food, but he thought it might be done in many cases. In regard to milk, for instance, he did not think the difficulty was insuperable, or that it would involve any injustice or injury to the trade. At all events, he was sure that if some board of reference were created on the lines indicated by the committee—a body in whom the public would feel confidence—an important step would be achieved towards improving the general quality of the food of the people. (Hear, hear.) The evidence given before the committee showed that an enormous amount of adulteration was going on in articles of food mostly of foreign production. The result of this was to so lower prices that in many cases our own producers were forced out of the market, while at the same time it operated strongly against the general productiveness of food in the country. (Hear, hear.) It was obvious that the production and supply of good food was a matter of great importance to the health and vigour and character of a nation, and this was an object to which every Government should attach importance. (Hear, hear.) The Government professed a desire to undertake social legislation. Here was an opportunity, then, for them to achieve a great work in this direction, and, in view of the facts and recommendations presented by the committee, he would urge them to give their attention to the matter as soon as they possibly could. (Hear, hear.)

Mr. Lambert (Devon, South Molton) thought the matter under consideration was one of considerable magnitude, for it seriously affected the health of the people. (Hear, hear.) It was a matter, too, in which the agriculturists of the country were deeply interested, because it involved a question of fair play in the sale of their own products. (Hear, hear.) He thought the hon. member who had spoken on behalf of the Government had read into the report of the committee many more difficulties than really existed in it with regard to legislation on the subject. It was shown by the committee that a large amount of adulteration was actually practised; especially was this the case with regard to butter, a very important article of food, and much of it which was sold as pure was of foreign manufacture and largely adulterated. Much of the foreign cheese also was largely adulterated, and it was actually a fact that several of the cheap articles of food imported and sold in this country were not allowed to be sold in the countries from which they came. Yet in face of that it was said that the Government wanted more time for consideration before undertaking legislation on the subject. He contended that the punishment for these offences was inadequate, and not at all commensurate with the enormous profit made by the trade. (Hear, hear.) It was not so much an agricultural question as a question which concerned the poor people of the country, and it was an extraordinary fact that in the poorer districts of the metropolis the Adulteration Acts were not so strictly enforced as in the richer. He did think that this Government, who came into power so largely through the support of the agricultural interest, might do something to enable the farmers to help themselves. (Hear, hear.)

General Laurie (Pembroke and Haverfordwest) said he belonged to a local authority which endeavoured to put these Acts into force, but when they did prosecute they were very lucky indeed if a penalty of 10s. was inflicted. Unless they could obtain better means of enforcing the law it would become a question with them whether they should continue to try to enforce it.

Mr. Channing (Northampton E.) said that the main portion of the report was a recommendation that a

board of reference should be established for the purpose of removing the numerous uncertainties in the law which caused such difficulties to the Courts administering it, and acted as a serious obstacle to the producers of this country. It was really absurd that there should be so much doubt and hesitation about the production of a Bill dealing with this question, the main portion of which was contained in a very small compass. The admitted difficulty of determining what was an adulterated article would be put in the way of rapid solution when once a Court of reference was started. This might be established in a few months and be on the road to deal with a vast volume of fraudulent trade which had inflicted so much injury to agriculture and loss on consumers. To have palmed upon them the hazy outlines of a Bill now in some remote pigeon-hole, and not even in a final form of preparation, was a just cause of complaint to those who had taken an interest in agricultural subjects against a Government which had gained so many seats by vast and reckless pledges to agricultural constituencies. He hoped his hon. friend, unless he received an assurance that legislation creating a Court of reference would within a reasonable time be brought before the House, would, by taking a division, give members an opportunity of recording opinions on the conduct of the Government.

Sir J. Leng (Dundee) denied that the committee of last Session were unanimous in their report. There were many important points on which differences of opinion were expressed, and it was a mistake to suppose that a Bill carrying out the report of a committee as it stood would meet with no opposition. (Hear.) So far as suggestions were made for improving the machinery of the present Act, no opposition would be raised, but proposals were made and agreed to in Committee by majorities, upon which proposals there were two distinct parties—the town party and the country party. One of the questions raised was whether an article of food which the evidence of numerous witnesses had pronounced nutritious, useful, and palatable should be presented for sale in a form and colour which would prevent its being used to a large extent. Another proposal was to largely increase the powers of the Customs to seize goods at the Custom House. He certainly could not assent to the use of the word “nefarious” as applied to the competition of foreign products, and the action of magistrates in refusing to inflict fines of more than a few shillings indicated that they did not consider offences under the Act justified the designation given in the amendment. In discussions on this subject there would be frequent reference to the sale of margarine, and if the report were carried out in legislation a fatal blow would be struck at the business in margarine. This article was greatly consumed among the poor under the name of margarine, and they paid for it half the price of fresh butter. He should strongly oppose any suggestion to check this trade. He much regretted that so many of his friends had shown the cloven foot of Protection. (Laughter.) Far better would they be employed in using their influence with agricultural communities for the establishment and encouragement of a system under enlightened and intelligent management such as had really been the cause of the competition of which they complained. The importations from Denmark and other countries were so large because the farmers of those countries had gone into the factory system and were able to put on the market an article of first-class quality in excellent condition. Let English farmers devote the same attention and care to the production of their dairy produce on the market and consumers would be able to dispense with foreign butters. In the butters imported from 15 countries, only five samples were found in any way adulterated. He thought that instead of an attempt being made to censure the Government for being dilatory, they would have been far more worthy of censure if they had

precipitately brought into the House a hasty and ill-considered measure. (Hear, hear.) For these reasons, as a member of the committee, he should certainly support the Government in opposing the amendment.

Mr. Balfour hoped they might now draw this portion of the debate on the Address to a conclusion. He had really nothing substantial to add to what had fallen from his hon. friend, which, he thought, was sufficient to show a practical assembly that the Government were not to blame for the course they had taken in the matter. Anybody who had listened to the debate must be convinced that the subject was one of great difficulty and complexity. It had engaged the attention of a very competent committee for no less than three years of continuous and arduous labour, and its recommendations were of a complicated and far from being of an uncontroversial character. It must also be evident from the debate that while there was no party complexion in the matter there was a conflict of material interests between the constituencies represented by gentlemen sitting on different sides of the House, and his experience was that where they found a conflict of material interests the debates to which they gave rise were quite as long and sometimes quite as heated as any that arose in the ordinary course of warfare between party and party. (Hear, hear.) He did not think it would be asserted by any gentleman that the programme of legislation the Government had put before the House this year was one which would leave them very much time to be filled up by measures not announced in the Queen's Speech, and the House might rest content with the assurance of his hon. friend that the matter was under the consideration of his department. The labours they had already devoted to the subject had produced a draft Bill which would require further consideration, but still it was a Bill which had been thrown into some sort of preliminary shape. Those labours would be continued, and he thought it would be asking more from the Government than could fairly be demanded at this stage of the Session to require them to give any sort of pledge as to the period when they would find themselves in a position to deal with the question. (Hear, hear.)

Mr. Lough (Islington, W.) pressed for an assurance that the existing law would be firmly enforced, contending that its strict administration would materially tend to lessen the danger of adulteration. He agreed with the first part of the amendment, but was opposed to that portion which seemed to favour Protection. They wanted to stop adulteration, but they did not want to stop the importation of foreign food. (Hear, hear.)

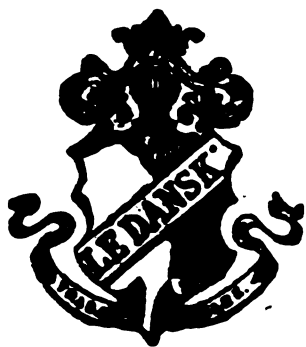
Mr. Kearley was willing that the debate should now draw to a close, and with a view to this result he would ask the right hon. gentleman, who had said, as he understood him, that at as early a period as possible the Bill would be submitted to Parliament, to go a step further and say it should be brought in during this Session.

Mr. Balfour was very unwilling to make any promise which might result in disappointment and which it might not be possible to fulfil to the absolute letter. All he could say, therefore, was that among the large number of measures competing for the support of the Government and the consideration of the House this was one to which they attached importance. He could not go further than that. With regard to the existing law he believed that rested not with any central, but with the local authority. He would inquire whether or not it rested with the central authority and see what could be done.

Mr. Kearley observed that in view of the right hon. gentleman's answer he should challenge a division.

The amendment, however, was then put and negatived without a division.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, FEBRUARY 13TH, 1897.

HELPING A LAME DOG OVER A STILE.

A BILL to consolidate and amend the law relating to the Sale of Food and Drugs has been introduced by Mr. Kearley, and is supported by Sir James Wodehouse, Mr. Horace Plunket, Mr. Lambert, Mr. Jeffreys, Mr. Nicol, Mr. Channing, and Mr. Maurice Healy. Second reading is fixed for

Thursday, March 18. Thus is the mental and physical lameness of Tyrone's turnspit being medicinally treated. Our own recipe for the ex-temperance spouting, tub-thumping, political hack would be—

| | Per cent. |
|---|-----------------|
| Straightforwardness | 50 |
| Courage to help honesty to prevail | 50 |
| | <hr/> 100 <hr/> |

But we fear the recipe would prove distasteful. We have one consolation—he is not our dog. If he were we should consider even the yearly cost of his licence woeful waste. But, strange to say, England provides him with office and money. Tyrone gives him the chance of collaring both by inflicting him upon public life. We have read of Irish outrages, but there are few to equal this deliberate fosterer of the Danish butter swindle and "burker" of any legislation or appointment of a court of reference to settle the water-in-butter question.

More than any other question in Ireland at the present moment this of a standard for water in butter vitally interests the entire country. The absence of a standard and the consequent prosecutions throughout England for excess water in Irish butters have inflicted great loss upon Ireland's chief industry, whilst Denmark, Sweden, and other countries are benefiting by the ill-repute and distrust the Irish butter trade has suffered from as the result of these prosecutions. Who stands in the path of those who would restore the good repute of the Irish butter trade? An Irish member. If there were a particle of common sense in Tyrone, this enemy of Ireland's trade would receive forthwith an unanimous demand that he should resign a Parliamentary trust so shamelessly and injuriously betrayed. This is not a question of party, but of honesty to English, Irish, Scotch and Welsh traders, and Mr. Kearley, along with the Conservatives, Liberals, and Nationalists who have supported his Bill, deserve the hearty good wishes of Irishmen of all beliefs just as thoroughly as Tyrone's political hack deserves their thorough contempt. It is related that when he stumped the constituencies at the last election a shrewd farmer, after listening to his weak, wishy-washy, everlasting flood of words for over an hour, was asked what he thought of it all. His reply was short and to the point: "I think an hour's rain would have been more useful."

Tyrone may well say with this farmer, an hour's real work to deal with the water-in-butter question would be more useful than all the drivel and blatherumskite their member is so perfect a master of.

SPECIALLY COMMENDED TO THE AMERICAN OIL GANG.

The Chemical Trade Journal, January 23, says:—"Recently a convent at Quebec, Canada, was burnt down and seven of the sisters burnt to death. The fire was first attributed to an oil lamp explosion. Seeing that the *minimum* flash point for burning oil under the Canadian law is 95° F. (Abel test), this announcement was startling, and it is most important that the fullest publicity should be given to the later report of the misfortune which emphatically exonerated the oil by stating that the fire really originated with some draperies, too near to which a lighted candle had been placed. As low flash advocates have only two cases against high flash oil to harp on, they may be tempted to make this accident a third. Their attention is directed to the above true origin, with a request that the truth will be regarded for once—just this once please."

THE FLASH POINT OF BURNING OILS.

THE *Chemical Trade Journal* of January 30 has the following home truths for the American oil gang and their emissaries:—

"I have followed with some interest your frequent references to the flash point of petroleum, and I have often wondered what it can be that prompts some who have doubtless great experience to give their credence and active support to the fallacy that oil of low flash point is a safe article for public consumption.

"The fact is that this oil has gained a footing by false pretences, and, being now in use to such a vast extent, there is and will continue to be great difficulty in making headway with any proposals for reform while our experts are so divided in their opinions.

"Some of those who speak with such authority have doubtless satisfied themselves by experimental proof that under certain conditions such oil can be used without much risk by those who understand its nature. Coroners' inquests, however, have made us only too familiar with the fact that the public *do not* understand the nature of low flash point oil; and even if the public were educated from their youth upwards in the knowledge of such things, there would still be accidents, for carelessness often afflicts not only the ignorant, but also at times those who know.

"Again, supposing even that there was no such thing as carelessness, such oil is none too safe, as the following personal experience of my own plainly shows. One night I sat reading in a room which was lighted by a duplex lamp, supplied with ordinary American oil, the oil vessel being of strong glass cemented into the socket of a metal stand. The lamp had been burning perhaps two hours, and was about three-quarters full of oil, when suddenly, without the slightest visible cause, there was an explosion of such violence as to throw the oil vessel out of its socket. It fell first on the table, and then rolled on to the hearth. Not being either pecuniarily or scientifically concerned in the question of flash point, I did not wait to see what would happen next, but instantly spread the table-cover over the fallen lamp, personal safety being my first consideration.

"I do not know whether the explosion had put out the flame, or whether it was extinguished by falling, or, lastly, whether it was extinguished by the tablecloth being applied. At any rate, the glass oil vessel was not broken, and beyond the loss of the chimneys no further damage was done, which was fortunate, perhaps, for me, as the fire was only a yard away.—Yours, &c.,

"JAS. KAY HILL.

"13, Osborne-place, Copland-road,
"Govan, Glasgow."

THE PETROLEUM COMMITTEE.

THE members of the Petroleum Committee which sat last Session [have been officially notified that a motion reconstituting the inquiry will be submitted on an early day. The Committee finished taking scientific evidence before the prorogation; but a considerable number of witnesses have still to be examined in regard to the construction of lamps, the commercial aspects of the case (which involve both the oil and the lamp trade), and the vital question of storage. It is fully expected that the testimony on these points will occupy the whole of the Session.

THAT SAFE PETROLEUM AGAIN.

THE London steamer, *L'Oriflamme*, an iron screw steamer of 2,129 tons net register, and carrying petroleum in bulk from Philadelphia, has gone ashore near the entrance to the port of Rouen in a bad position. It subsequently caught fire, and after burning three days is still burning, and constitutes a serious danger to

navigation. Captains of vessels have been warned that they can only pass at their own risk and peril. Around the burning vessel there is a zone extending 100 metres in all directions in which it is impossible to undertake that explosions will not from time to time occur. The steamer was built in 1892, and was owned by the Petroleum Shipping Co., London.

THE SALE OF ARSENICAL SOAP.

AT Richmond, on January 14, before His Worship the Mayor, and other justices, J. W. Tapling, of 3, Station-parade, Kew Gardens, Richmond, chemist, was summoned by R. A. Houghton, Inspector under the Food and Drugs Act to the County of Surrey, for having sold arsenical soap not of the nature and substance demanded.—Mr. Oldfield appeared to defend.—The facts showed that an assistant to the inspector obtained from the defendant's shop for 6d., a tablet of soap, the wrapper of which was labelled "Dr. Mackenzie's Arsenical Toilet Soap, No. 2, unscented, perfectly harmless, S. Harvey." Defendant's assistant declined to have it divided into three parts. It was submitted to the analyst, whose certificate read, "I am of opinion the sample contains the parts as under, or the percentages of foreign ingredients as under: Soap free from arsenic, 100 per cent. Observations: There is no authorised formula for arsenical soap."—Dr. Stevenson, official analyst, in proving his certificate, stated that as he heard there was 1/100th part of a grain in this make of soap, he was very minute in his analysis. He divided the tablet in half; one half he retained.—In answer to the Bench, he said he could go so far as satisfactorily to detect arsenic if it existed in any substance to the proportion of one part in half a million, and had there been 1/100th part of a grain per lb. in the soap, the amount in the whole sample would be 1/1600th part of a grain. In substance, even if it contained that amount, he should regard it as free from arsenic for all practical purposes.—The Mayor: It would have no effect on the skin. It is a popular fallacy that arsenic is good for the complexion. I have asked several chemists their opinion upon arsenical washes, and their value, and they said they never supplied them. If taken internally it was only 1/40th part of a medicinal dose, supposing the arsenic existed at the ratio of 1/100th part of a grain to the pound.—The Mayor: Then the statement "There is no soap which has so marvellous an effect upon the skin and preventing the growth of hair," you consider incorrect?—It cannot be done with arsenic.—In cross-examination he said arsenic in lotions and washes for medicinal purposes had been obsolete for years. There were limits to his powers of detection, but he should say it was quite possible to trace arsenic in ordinary soap, its presence being due to the component parts of the soap. He had found arsenic in arsenical soap.—Mr. Oldfield submitted the soap was not a drug, and in order to convict under Section 6 of the Act the Bench must satisfy themselves it was.—Alderman Burt (one of the Bench): Do you admit there is no arsenic in it?—Mr. Oldfield: For the purpose of the argument. But I say the proceedings should be brought under the Merchandise Marks Act.—Mr. Dumbleby (one of the Bench) trusted that line of argument would be supported by evidence of fact.—Alderman Burt: In the face of your advertisement, do you say there is arsenic in the soap or not? Is your advertisement true, in fact?—Mr. Oldfield: It is.—Alderman Burt: If that is so, it is a drug, and you are on the horns of a dilemma.—The Mayor: The advertisement of the soap contends "There is no soap made which has such a marvellous effect upon the complexion, making the hands white, nourishing the skin, and preventing the growth of superfluous hair." That is beyond toilet purposes.—Mr. Oldfield: I may say that is a little "puffing," which should not be used against my client.—The Mayor said the Bench had

come to the conclusion that the soap was a drug.—Mr. Oldfield then applied for an adjournment so that the other moiety of the sample could be sent to Somerset House for analysis, and the Bench assented to the application.—*Pharm. Jour.*

At Epsom, on January 25, Frederick Oxley, chemist, Epsom, was summoned for selling a "certain drug, to wit, arsenical soap," which was not of the "nature, substance, and quality" demanded.—Mr. Goold, from the office of the County Council, appeared to prosecute, and stated that although the facts were extremely simple he would like to make a few remarks. The defendant had explained that he was not the manufacturer of the soap; and it had been suggested in other cases that it was perhaps a hardship upon the seller of this "arsenical soap" to be prosecuted when the fraud which was complained of was committed by others. Upon that he would like to point out that the Legislature had seen fit to make the seller who took the profit responsible for the quality of the goods he sold to the public.—The Chairman: The seller can have the goods analysed before he buys from the manufacturer.—Mr. Goold: Quite so; he cannot screen himself behind the manufacturer, who we may not perhaps be able to get at, as he may be out of the country. Counsel also produced a trade journal, in which there was an advertisement from the manufacturers of this identical soap offering to indemnify anyone fined for selling it. He also produced a piece of the soap, a shilling tablet, which was sold over the counter for 10½d. That price was obtained, he said, because the manufacturers had induced the public—the ignorant public—to believe that arsenic was good for the skin. As a matter of fact, it had been proved that arsenic was detrimental to the skin. But by trading on a false impression the makers of this soap got 10½d. for each tablet which absolutely contained no arsenic whatever, the market price being about 2d. or 3d.—Mr. Martin, the inspector, having proved the case and produced the certificate of Dr. Stevenson, the public analyst, was asked by Mr. Dorling if he knew what he was going to get when he went to defendant's shop?—The inspector replied, No; he knew that there was a genuine arsenical soap in the market.—Defendant said he sold the soap believing that there was arsenic in it.—The Chairman: Well, we are bound to protect the public; you may have been taken in yourself, but you have a remedy against the people of whom you bought it. We cannot do less than fine you 10s. and costs.

At Kingston, on January 27, Mr. Sidney H. Hope, solicitor, referring to the case in which Mr. Alfred Higgs, J.P., was fined 10s. for selling arsenical soap, said that since his client asked the magistrates to state a case two or three similar cases had been dealt with by justices in the neighbourhood, and at Richmond and Wimbledon the magistrates held that "arsenical soap containing no arsenic was not a drug, and that, therefore, proceedings could not be taken under the Food and Drugs Act, but under some other Act. Since these decisions had been given, counsel had advised his client that it would be better for him to await the result of the appeal which the Surrey County Council intended to make in respect to these two cases, and Mr. Higgs did not therefore, propose for a time to proceed with the case which he had applied to the Bench to state. He would also like to add that Mr. Higgs was pursuing his civil remedies against the manufacturers of the soap for damages, and that application by Mr. Houghton for further summonses at Richmond had been refused pending the result of the appeal to which he had referred.—The Mayor: You only mention, I notice, the cases at Richmond and Wimbledon, and not the case which was decided by the county justices at Kingston.—Mr. Hope: That is so, sir. I understand that at Epsom the magistrates ruled similarly to your worships.—The Mayor said that the Bench understood Mr. Hope's statement was to come as information to them.—Mr. Hope said that was so.

COPPER IN PRESERVED PEAS.

In a report to the Isle of Wight County Council, Mr. Otto Hehner, public analyst, states that of eight samples of preserved peas two samples contained such notable amounts of copper that he felt it his duty to give formal certificates of adulteration, especially as during the last few months very many convictions of vendors of similar articles had taken place in different parts of the country. Copper was added to vegetables like peas in order to give them the unnatural green colour desired by many purchasers. There was no doubt that without this or some other addition the colour of delicate vegetables became more or less brown in a tin or bottle. Copper, however, was almost universally acknowledged to be a poisonous substance, as metal or as a salt, when introduced into the system. The only argument which could be brought forward in favour of coppered vegetables was that the public liked the colour, and that they did not, as a rule, eat a sufficient quantity of the coppered article to feel the effects natural to compounds of copper. These arguments had never been held to be valid. Mr. Hehner states that the magistrates had thought fit to dismiss the summonses against the vendors of the coppered peas, and it followed that, while it was unlawful to sell coppered peas in London or Bristol (where convictions had followed), the inhabitants of the Isle of Wight might lawfully be subjected to a copper treatment by their grocers.

Dr. Wynter Blyth, public analyst for Marylebone, in his quarterly report, states that a tin of green peas was found to contain three grains of copper to the pound. There was an irregularity in taking the sample, so that no certificate could be acted upon with even a probability of success, and when attempts to obtain a second supply were made, the brand had mysteriously disappeared. There had been a number of convictions for selling peas containing from 2½ to 3 grains to the pound, and most of these have been taken under that section of the Sale of Food and Drugs Act which enacts a penalty for the sale of food injurious to health. Proceedings under this section are often extremely costly, because such proceedings necessitate a large amount of expert evidence. The question whether tinned peas containing copper in the proportion of three grains to the pound are absolutely injurious is still a matter of opinion, and in all prosecutions divergent evidence has been given. It would, therefore, in any future action, be wiser to prosecute under the 6th section, which makes it an offence to sell any article of food to the prejudice of the buyer, and not in accordance with his demand. It is not likely that a customer will ask for coppered peas, and if he simply ask for a tin of preserved peas and is supplied with peas coloured to any considerable extent with copper, this is surely an offence under the 6th section, and the prosecuting authority would not be under the obligation to show that the peas were injurious to health, which is, as already stated, a matter of opinion.

ADULTERATED BEESWAX.

Our contemporary, the *Chemist and Druggist*, reports a meeting of the Chemical Trade Section of the London Chamber of Commerce, which considered, *inter alia*, the prevalence of adulteration of beeswax with mineral wax, resin, and other substances, and the possibility of taking action to put a stop to that practice. The discussion, though of much interest, did not lead to any practical result. Mr. Umney stated that in the new Pharmacopœia, which would probably be issued this year, revised tests for beeswax would probably be given. The matter had been under discussion by the Pharmacopœia Committee, but it had been pointed out that although the B.P. tests had been a subject of much discussion, yet no one had been able to detect any error in the present Pharmacopœia tests based upon observations on

English beeswax. They knew that beeswax imported into this country was often enough adulterated with paraffin, resin, goat's fat, and probably also Japan wax, but it was also often impure from causes which could not be described as deliberate adulterations. For instance, he had found that at the present moment it was practically impossible to obtain chemically pure bleached white wax in London. They could get a material containing fully 98 per cent. of pure beeswax; but even in the best parcels there was also a certain small proportion of foreign matter, mainly, he thought, mustard oil and paraffin. Mustard oil was put in to facilitate the course of bleaching, and traces of paraffin often occurred because of the improved system of apiculture, which had led English bee-keepers to use artificial paraffin cells for their bees. Moreover, several bleachers openly admitted that they had to use 5 per cent. of spermaceti to obtain a suitable white colour in bleaching, because the English climate did not permit beeswax to be bleached quite white. Such impurities could not be looked upon in the same light as deliberate frauds with goat's fat, paraffin, etc. Mr. Domeier said that although absolutely pure bleached white wax could be obtained here, the price was about 30s. per cwt. above that of "almost pure" wax, such as Mr. Umney had mentioned, and dealers could not afford to pay that difference. A member asked whether absolutely pure beeswax could be, and was, made outside England. Mr. A. B. Hill replied that it was made in the United States, where climatic conditions were more favourable. Mr. Howard thought that in the next B.P. there should be a test applied to all beeswax used as a drug.

ADULTERATED JAPAN WAX.

C. H. LA WALL considers that the extent to which the Japan wax of commerce is adulterated at the present time has never been equalled. Of 59 cases containing from 205 to 225 pounds each, 25 were found to be adulterated with starchy material to the extent of 20 to 25 per cent. The specific gravity of the sophisticated product was slightly higher than that of the genuine wax, and it was, as a rule, free from the peculiar network of minute cracks which usually characterise the surface of cakes of pure Japan wax.—*American Journal of Pharmacy*, lxi., 18.

THE GREAT SUGAR QUESTION.

At North London, on January 28, Mr. Bros resumed the hearing of the summonses taken out by the Islington Vestry against local grocers for selling as Demerara sugar an article which was but an imitation. The inquiry had been adjourned to enable Mr. Ford, who defended, to call expert evidence in proof that the article sold by the defendants, though not Demerara sugar, was a better and purer article, and consequently

not "sold to the prejudice of the purchaser." Mr. Bramall prosecuted for the Vestry. Mr. Benjamin Newlands, a Fellow of the Chemical Society, a member of the Society of Public Analysts, and a consulting chemist in all matters concerning sugars, said he attended on subpoena and much against his will. The yellow crystals, he said, were tinted, whether made at home or abroad. Rather less than half an ounce of colouring matter was used to colour a ton of beet crystals. The same colouring matter was used for butters, oils, etc., and he should say it was not in any way injurious to health. He had tried it upon mice with no ill results. There were, on an average, 2,000 tons of these yellow crystals made in London every week, and he had never received any complaints. His investigations showed that there was 2 or 3 per cent. more actual sugar in the yellow crystals than in the Demerara. There was no doubt that the crystals were the better sugars; but the fact of the Demerara being the dearer of the two was because there was a certain prejudice in favour of Demerara. He could tell the difference between the sugars by the sticky substance in the Demerara. The difference in the colour of the two sugars was very slight when both were thoroughly refined, the darker colour in Demerara being very often attributable to dirt. Mr. Edwin Lyle, whose firm trades in London and Greenock, said he had had 30 years' experience in all kinds of sugar. He bought his sugars by analysis. There were high and low qualities both of cane and beet sugars. The trade in yellow crystals was gradually on the increase. His firm also manufactured from the cane and beet, and his opinion was that the latter was immensely superior. This was his unbiased opinion, because the yellow crystals contained from 3 to 4 per cent. more sugar than the Demerara. In reply to Mr. Bros, Mr. Lyle agreed that the evidence of Mr. Quinton Hogg only proved that the yellow crystals were much cleaner than the Demerara. With regard to the imports of sugar, the Board of Trade returns for 1896 showed that of a total of 1,500,000 tons imported only 70,000 tons were from the British West Indies (including Guiana and Demerara). The process of refining the sugars was much the same, but there were little trade secrets in the different refineries which they did not always care to divulge. Mr. Bramall: You are a careful man, Mr. Lyle. Mr. Lyle: I am a Scotchman. (Laughter.) He would answer one question, and that was that sugar was dyed for no other purpose than to please the public. Pure sugar might be all white. Mr. Bramall: You would naturally say your sugar is best? Mr. Lyle: No, I do not say it is better than Mr. Tate's. Mr. Bramall: But better than Mr. Hogg's? Mr. Lyle: Oh, yes, by a long way. (Laughter.) Mr. John Richardson, sugar buyer to Mr. James Budgett, said he had 22 years' experience. So far as his knowledge went beet crystals were mostly used for jam making. Yellow crystals were now the dearer on the market. At this point the case was again adjourned for a week.

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A BUTTER APPEAL CASE: AN ERROR IN THE ANALYSIS.

IN the Justiciary Appeal Court, Edinburgh, on January 27, an appeal was stated on behalf of Jacob Stirling, grocer, 16, Stewarton-street, Wishaw, trading as Brown Brothers, Armadale. The appellant was charged before Sheriff Melville at Linlithgow with having sold salt butter which, upon analysis, was found to contain 46 per cent. of fat not derived from butter. The Sheriff convicted, and imposed a penalty of £10, with the alternative of one month's imprisonment.

Mr. Cook, for the appellant, said there had been a gross miscarriage of justice. The circumstances were that the sanitary inspector for the burgh of Armadale purchased butter in the appellant's shop, and, in accordance with the provisions of the Food and Drugs Act, he divided the butter into three portions, one of which he left with the appellant, and took the other two away. One of those he took away with him was sent to be analysed, and the burgh analyst, Dr. Readman, reported that the butter was adulterated. The prosecution and conviction followed. The appellant had sent the sample which was left with him to Dr. Clark, Glasgow, to be analysed, and Dr. Clark reported that the butter was perfectly good. The Sheriff, in disposing of the case, gave some extraordinary reasons, as, for instance, that the analyst for Armadale was known to the Court, whereas the other analyst was not, and it was not for him to explain away where the mistake was. It had turned out, counsel said, that the analysis for the prosecution was entirely untrustworthy, owing to a blunder by the assistant to the analyst to whom the sample had been given to test.

Mr. Clyde, for the respondent, admitted that a mistake had been made, and it must be rectified. He lodged a minute in which it was acknowledged that the analysis was faulty, and it was stated that the respondent consented to the conviction being quashed, the appellant being found entitled to expenses.

The Court gave effect to the minute.

THE EXCESS WATER-AT-SPIRIT-PRICE GAME.

THE RESULT OF THE APPEAL JONES v. THOMAS.

FOR several years we have been engaged in pointing out how much money is extracted from the pockets of purchasers of spirits by the practice of the notice dodge, which had its lengthened innings owing to the decision of Lord Chief Justice Cockburn in the case of *Sandys v. Small*. Since that date the mere exhibition of a notice in a public-house that "All spirits sold in this establishment are diluted" has been held to entitle the vendor to put as much extra water into his spirits as he chooses over and above the quantity recognised by the Act, namely, for brandy, rum, and whisky 25 degrees u.p., and for gin 35.

In that excellent work *The Law and Chemistry of Food and Drugs*, by Robinson and Cribb, several decisions are quoted from this journal showing the difficulties inspectors have had to contend with in endeavouring to secure that the purchaser of spirits should not pay spirit price for added water. Any attempts, however, to remedy this very unsatisfactory state of things were ineffectual until December 9th last, when Superintendent Evan Jones, Deputy-Chief Constable, Pontypridd, caused the question to be tested in the Queen's Bench Division in the important appeal case of *Jones v. Thomas*. Curiously enough, the grave importance of this case was entirely overlooked by the press of the United Kingdom with one exception—the *South Wales Daily News* of December 10 last. That its vital importance as bearing upon this notice dodge may be thoroughly understood, we think it wise to re-publish the decision as originally reported in the above paper.

JONES v. THOMAS.

"In the Queen's Bench Division of the High Courts

of Justice, on December 9, before Mr. Justice Wills and Mr. Justice Wright, sitting as a divisional court—a special case for the opinion of the Court on a point under the Sale of Food and Drugs Act, 1875, and in connection with a sale of rum diluted by water in excess of the amount permitted by law, was submitted by Mr. H. R. E. Childers on behalf of the appellants. From counsel's statement it appeared that an information was laid before the justices of Glamorganshire under Sections 38 and 39 of the Act by Evan Jones, Pontypridd, an inspector under the Act, against Edwin Thomas, of Porth, innkeeper. The information charged Thomas that on May 25 last he sold to a constable a bottle of rum, which was not of the nature, substance, and quality of the article demanded, but was rum mixed with 72·86 per cent. of water and extractive matter. The case was heard at Pontypridd on June 24. The justices, being of opinion that the affixing of a notice was a sufficient protection to the publican, dismissed the information, and the inspector appealed. Mr. Childers submitted, as the most important point, that a notice stated to be fixed and visible in a public-house bar was not a sufficient protection to the seller.—Mr. Justice Wright at once assented, saying: Clearly not; under the section to which they refer it should have been fixed to the bottle.—Without further hearing, Mr. Justice Wills gave the decision of the Court. He said that the case must go back to the magistrates for further inquiry to ascertain whether the customer was prejudiced, and with an intimation from this Court that Section 8 was not complied with. There also remained the question whether the purchaser had notice. This Court could not decide that, and the justices must inquire into it. Both the questions of law were answered in the negative, and the case goes back to the justices. No costs of this appeal were allowed."

Numerous cases brought before the courts as the result of this appeal being read by our readers, have resulted, to the intense surprise of the parties summoned, in convictions with substantial fines, some of which have been already recorded in these columns.

The Central Board of the London Licensed Victuallers' Association have, we understand, decided to further appeal against these convictions, and on behalf of the whole of the trade have served the necessary notices upon the magistrates at Brentford to state a case on the conviction of W. Palmer. We sincerely trust that their efforts to give a new lease of life to this notice game will be frustrated. We are not amongst those who believe that the trade of the publican is a vile one, or one that should be harassed, spied upon or venomously attacked, but this is a question of the honest conduct of a trade, and it is in the interests of the publicans themselves that the practices adopted by some members of their brotherhood of selling as whisky liquids being as much as 55 to 60 degrees under proof should be repressed. They bring discredit upon the trade, they are an injury to the public, and there is no shred of a shadow of justification for their continuity. The better-class publicans themselves recognise that this is an indefensible practice, and we think that the Central Board of Licensed Victuallers' Association are extremely ill-advised in trying to bolster it up, as such action is really placing them before the public as persons who are more concerned with the continuity of a questionable traffic than with upholding their dignity and protecting their legitimate trade interests.

A MAGISTRATE'S FUNNIOISITIES.

HENRY WRIGHT, late landlord of a beerhouse called the Plough, Brick-lane, Spitalfields, again appeared at Worship-street, on the 28th, in answer to a summons taken out by the Excise for diluting beer on the premises. When defendant was last before the Court the Excise proved that the sample taken had "added

water," but failed to prove that the ale could not have been tampered with between the time it was run from the brewing tun till delivery to the defendant. He asserted that he never adulterated it.—Mr. Dennis, for the Excise, now admitted that he could not get the needful evidence to complete the case, and must withdraw it.—Mr. Cluer ordered the defendant's discharge, saying that "he left the court without the beer having stained his character."

LECTURES AND DEMONSTRATIONS AT THE SANITARY INSTITUTE, PARKES MUSEUM, MARGARET STREET, W., ON MONDAYS AND THURSDAYS AT 8 P.M.

FEBRUARY.

Monday, 15.—Introductory Lecture, on Factory Legislation.—(Admission free.) A. Wynter Blyth, M.R.C.S., F.I.C., F.C.S., Barrister-at-Law, Medical Officer of Health, St. Marylebone.

Thursday, 18.—Sanitary Law. English, Scotch and Irish; General Enactments Public Health Act, 1875; Model Bye-Laws, &c.—Herbert Manley, M.A. Cantab., M.B., D.P.H., Medical Officer of Health, West Bromwich.

Monday, 22.—The Law Relating to the Supervision of Food Supply.—A. Wynter Blyth, M.R.C.S., F.I.C., F.C.S., Barrister-at-Law, Medical Officer of Health, St. Marylebone.

Wednesday, 24.—Inspection and Demonstration in the Parish of St. George's, Hanover-square, at 2 p.m. (number limited), conducted by Albert Taylor, Chief Sanitary Inspector.

Thursday, 25.—Sanitary Laws and Regulations Governing the Metropolis.—A. Wynter Blyth, M.R.C.S., F.I.C., F.C.S., Barrister-at-Law, Medical Officer of Health, St. Marylebone.

MARCH.

Monday, 1.—Nature of Nuisances, including Nuisances the abatement of which is difficult.—Arthur Newsholme, M.D., M.R.C.S., D.P.H., Medical Officer of Health, Brighton.

Wednesday, 3.—Inspection and Demonstration at L.C.C. Common Lodging House, Parker-street, Drury-lane, at 3 p.m. (number limited), conducted by Mr. Frank Ruddle, of the Estates and Valuation Department of the London County Council.

Thursday, 4.—Objects and Methods of Inspection.—J. F. J. Sykes, D.Sc., M.D., Lecturer on Public Health, Guy's Hospital, Medical Officer of Health, St. Pancras.

Saturday, 6.—Inspection and Demonstration at the Marylebone Stoneryard, Richmond-street, Edgware-road, W., at 3 p.m. Conducted by C. J. Kilgallin.

Monday, 8.—Factories, Workshops, and Offensive Trades.—Prof. A. Bostock Hill, M.D., D.P.H. Camb., F.I.C., Queen's Professor of Hygiene and Public Health, Mason's College, Birmingham, Medical Officer of Health, Sutton-Coldfield, etc.

Wednesday, 10.—Inspection and Demonstration of Disinfecting Apparatus and Model Steam Laundry at St. John's Wharf, Fulham, at 3.30 p.m. Conducted by W. G. Lacy.

Thursday, 11.—Construction and Arrangements of School Buildings.—J. Osborne Smith, F.R.I.B.A.

Saturday, 13.—Inspection and Demonstration at the Aylesbury Dairy Co.'s premises, Bayswater (number limited), at 3 p.m.

Monday, 15.—Diseases of Animals in Relation to Meat Supply; Characteristics of Vegetables, Fish, etc., Unfit for Food.—Alfred Hill, M.D., F.R.S.E., F.I.C. Medical Officer of Health, Birmingham.

Wednesday, 17.—Inspection and Demonstration at L.C.C. Common Lodging House, Parker-street, Drury-lane, at 3 p.m. (number limited), conducted by Mr. Frank Ruddle, of the Estates and Valuation Department of the London County Council.

Thursday, 18.—Infectious Diseases and Methods of Disinfection.—Henry R. Kenwood, M.B., D.P.H., F.C.S., Medical Officer of Health, Stoke Newington.

Saturday, 20.—Inspection and Demonstration at Friern Barnet Sewage Works, at 3 p.m., conducted by E. J. Reynolds, Asso.M.Inst.C.E., Surveyor to the District Council.

Monday, 22.—Water Supply, Drinking Water, Pollution of Water.—Professor W. H. Corfield, M.A., M.D. Oxon, F.R.C.P., Professor of Hygiene and Public Health, University College, London, Medical Officer of Health, St. George's, Hanover-square.

Wednesday, 24.—Inspection and Demonstration of Disinfecting and Filtering Appliances at J. Defries and Sons, Limited, 147, Houndsditch, E.C., at 3 p.m.

Thursday, 25.—Inspection and Demonstration at the Metropolitan Cattle Market, York-road, N., at 3 p.m.; Demonstration of Diseased Meat, at the Parkes Museum, at 8 p.m., by W. A. Bond, M.A., M.D., D.P.H., Medical Officer of Health, Holborn and St. Olave's, Southwark.

Saturday, 27.—Inspection and Demonstration at Harrison and Barber's Knacker Yard, Whitechapel, at 3 p.m.

Monday, 29.—Ventilation, Warming and Lighting.—Joseph Priestley, B.A., M.D., M.R.C.S., D.P.H. Camb., Medical Officer of Health, Lambeth.

Wednesday, 31.—Inspection and Demonstration in the parish of St. George's, Hanover-square, at 2 p.m. (number limited), conducted by Albert Taylor, Chief Sanitary Inspector.

APRIL.

Thursday, 1.—Principles of Calculating Areas, Cubic Space, etc.; Interpretation of Plans and Sections to Scale.—J. Wallace Peggs, Assoc.M.Inst., C.E.

Saturday, 3.—Inspection and Demonstration at the Aylesbury Dairy Company's premises, Bayswater (number limited), at 3 p.m.

Monday, 5.—Sanitary Building Construction.—Professor T. Roger Smith, F.R.I.B.A., Professor of Architecture, University College, London, District Surveyor, West Wandsworth.

Wednesday, 7.—Inspection and Demonstration at the Disinfecting Station, Chelsea, at 3 p.m., conducted by Louis Parkes, M.D., D.P.H.; Inspection of the West London Paper Mill Company's Works, Fallopian Wharf, Lot's-road, Chelsea, at 4 p.m.

Thursday, 8.—Details of Plumbers' Work.—J. Wright Clarke.

Saturday, 10.—Inspection and Demonstration at the Sewage and Destructor Works, Ealing, at 2.30 p.m.—Conducted by Charles Jones, M.Inst.C.E., Engineer and Surveyor, Ealing Urban District Council.

Monday, 12.—Sanitary Appliances.—George Reid, M.D., D.P.H., Medical Officer of Health, Staffordshire County Council.

Wednesday, 14.—Inspection and Demonstration of Artisans' Dwellings, Boundary-street Area, Bethnal Green, at 3 p.m.—Conducted by Mr. Owen Fleming, of the Architect's Department, London County Council.

EASTER.

Thursday, 22.—House Drainage.—W. C. Tyndale, M.Inst.C.E.

Saturday, 24.—Inspection and Demonstration at Beddington Sewage Farm, Croydon.—Conducted by Thos. Walker, M.Inst.C.E., Borough Engineer and Surveyor, Croydon.

Monday, 26.—Sewage and Sewage Disposal.—Professor Henry Robinson, M.Inst.C.E.

Wednesday, 28.—Inspection and Demonstration at the East London Water Works, Lea Bridge, at 3 p.m.—Conducted by W. B. Bryan, M.Inst.C.E., Engineer to the Company.

Thursday, 29.—Scavenging, Disposal of House

Refuse.—Charles Mason, Asso. M. Inst. C.E., A.R.I.B.A., Surveyor, Vestry of St. Martin's-in-the-Fields.

MAY.

Saturday, 1.—Inspection and Demonstration at the Sewage Outfall Works, Barking.—Conducted by Jno. Ed. Worth, M. Inst. C.E., District Engineer, London County Council.

It is hoped that the arrangements will be made to give the students notice of any cases of interest before the Courts bearing on their duties.

Further particulars of the visits will be supplied to students with the tickets for the course.

Particulars of fees and other arrangements are given on the first page.

CORRESPONDENCE.

A PLEA FOR DAIRYMEN.

To the Editor of FOOD AND SANITATION.

SIR,—As dairymen, we contend there is not a shadow of a doubt that we have a genuine grievance in the spasmodic impotence of the working of the Amendment Act of 1879; its scope is limited to the jurisdiction of local authorities, and from this cause alone it is a partial failure.

The Manchester and Salford Milk Dealers' Association were the promoters of this amended Act, and we can testify, from our long experience, that when it can be put in force it is everything that could be desired, and it works impartially and without friction. This law is just, fair, and impartial in its working between the farmer and the dairyman; the authorities and the inspectors are perfectly neutral (not engaged upon either side), as it makes no difference to them, and the procedure is witnessed by dairymen whose only interest is that the law shall be carried out strictly impartial. Taking samples of milk at railway stations is the most important procedure under the Sale of Food and Drugs Act, is that it checks adulteration and the result pointing with unerring wisdom to the adulterator. There are two persons who are deeply interested in these proceedings—the farmer and the dairyman. The one "grows" the milk, knows all about it, and contracts to send it to the dairyman unadulterated, and as the cows give it. The dairyman's position is this: he is dependent upon the farmer keeping his promise to send him pure, unadulterated milk as per contract. Considering the conditions under which the dairyman has to work, we contend that when the dairyman is charged with selling adulterated milk, that it is not only a reasonable request but an official duty that samples of the farmer's milk shall be taken as soon afterwards as possible. By taking samples of the farmer's milk we do him no injustice, nor is there any undue advantage taken of him. The dairyman has to run this same risk every day of having samples of this same farmer's milk taken, and if not sent according to contract, would certainly be fined. The farmer sends his milk away to the station in its regular course, not knowing that samples will be taken, but they are taken on arrival by the inspector, he being the first to take possession of the milk, so the sample will be a fair, honest sample of the quality of the milk he was daily serving to the dairyman. There is no jury in the kingdom but would admit this was a fair trial. But surely the farmer has nothing to fear if he keeps to his contract to send pure, unadulterated milk as the cows give it: every sample taken will prove him an honest man. The Amendment Act being limited to the jurisdiction of the local authority, the inspector could not cross the street in some cases to take a sample of milk, and in large towns it is often a dead letter. We have five railway stations here where milk is delivered to be sold, yet the authorities have no control over this large milk

supply except by prosecuting the dairyman, who may be perfectly innocent of the slightest intention of fraud; and every dairyman who retails this milk has no protection from the Amendment Act: the law is a dead letter to him. If dairymen are to have just and reasonable protection against unjust prosecution, the inspector must have full power over the milk supply from its source to its sale.

Following adulterated milk up to its source is the only real protection the dairyman has of absolutely proving his innocence; a written warranty may protect a man from prosecution, but is no proof he is innocent. We want palpable, convincing, and satisfactory proof that we are innocent of deliberate fraud; but this can never be until the Amendment Act can be applied to each case of milk adulteration.

In desiring a change in the law, we have the full sympathy of all the authorities in this district; also the public analysts have inserted a clause in their suggested draft Amendment Bill to amend the Sale of Food and Drugs Act, giving food inspectors the power to take samples either in or out of their districts; also, at a conference of the Vestries, held at the Vestry-hall, St. George's, Hanover-square, London, June, 1894, a similar resolution was passed. This is overwhelming testimony from persons who understand the working of the Sale of Food and Drugs Act. I know that the Amended Act is a great boon to dairymen, and gives us much help now with its limited scope, but if it were applied to each case of adulteration our confidence would be unbounded.

It is only technical obstacles that block the way to a change in the law. There is a law in force at present whereby local authorities may extend their boundary five hundred yards; Manchester authorities availed themselves of this clause for about seven years, and very well it worked until it was found out that the analyst was only the analyst of the district, so could not analyse the samples taken. This obstacle is not a very formidable one, and the rest are of the same insignificant and contemptible character. If we can go five hundred yards without hurting anyone, or anyone knowing we have been, there is no earthly reason why we cannot follow milk up to its source. It is for the public good, for the protection of the dairyman, and the stamping out of adulteration.—Yours, etc.,

Manchester.

ROBERT EDGE.

THE FOWL THAT NOBODY BOUGHT—FORTUNATELY.

AT Yarmouth Police-court, Alfred Dixon, Filby, was summoned for exposing for sale a fowl unfit for food. The Town Clerk prosecuted, and Mr. H. Chamberlin defended.

Inspector Hassell stated that he attended the Market on Saturday, the 2nd ult. He examined a fowl at defendant's stall, which he found exposed for sale, and which smelt very strongly. The heart, liver, and gizzard were much decomposed. Defendant told him it was not for sale. Witness seized it, and the medical officer and a Justice of the Peace (Mr. Lovewell Blake) condemned it. The fowl was afterwards covered with carbolic acid and destroyed at the Isolation Hospital.

By Mr. Chamberlin: Another magistrate (Mr. Leach) saw the fowl, but considered only a part of it was unfit for food. Defendant informed him it had been killed five or six days before. He did not believe that, being of opinion it had been dead a much longer time. The body was quite unfit for human consumption. Defendant came to the Town Hall, and suggested two or three people whom he wished to call in to look at the fowl. This was not entertained.

Dr. J. Bately, Medical Officer of Health for the borough, described part of the defunct rooster in question as putrid, and all as unwholesome.

In defence, Mr. Chamberlin submitted the fowl was killed on the Monday after Christmas, and owing to the

mild, damp weather, it did not smell very well. Defendant had no guilty knowledge that he was exposing for sale what was unfit for food. Was it likely that a man who had kept a stall for twenty years, and whose father had kept it for forty years before him, would jeopardise a good character knowingly?

The magistrates fined defendant 10s. and costs, and expressed an opinion that defendant should have been allowed to call an expert to examine the fowl.

THE BUTCHER AND THE COW.

At the Stockport Borough Police-court on the 20th ult., William Royle, butcher, of Avenue-street, Brinnington, was summoned for having the carcase of a diseased cow in his slaughter-house for the purpose of preparing it for food, on January 12.—Inspector Charles Billingham stated that on the morning of the day in question he visited the slaughter-house of the defendant in Avenue-street, Portwood. He found it locked up, and he at once proceeded to the shop in Great Portwood-street. Defendant accompanied him to the slaughter-house. On the way witness asked the defendant if he had anything in the house. He said, "I have a cow, and it is badly graped." This meant that it was affected with tuberculosis. Witness then asked him what it was doing in his slaughter-house. The defendant said it was one he had killed and dressed for John Wilson, of Gatley, as a friend. On arriving at the slaughter-house, witness found there the carcase of a cow hanging in the usual way. Witness examined the carcase, and found traces of tuberculosis in small portions of the pleura that had been left in the lungs, and at the root of the tongue. Witness told him that he should seize the carcase and have it examined by a veterinary surgeon. At a subsequent conversation the defendant told witness that the carcase was not his, but Wilson's. Witness said that he had nothing to do with that. The slaughter-house was the defendant's. The defendant then said that he had bought the cow off Wilson.—Mr. Harry Newton addressed the court for the defence. The meat was not intended for sale, and, further, was not concealed. It was left where persons came in and out every day. Not until they killed it did the defendant know that the animal was wrong.—The magistrates retired for a few minutes, and on their return into court fined the defendant £5 and costs, or one month's hard labour.

POISONED BY A CESSPOOL.

In the Queen's Bench, on January 13, before Mr. Justice Mathew and a special jury, there was tried the case of *Walder v. Sutton Urban District Council and Mauser*. This was an action brought by Mrs. Margaret Edith Walder, on behalf of herself and her four children to recover damages for the loss of her husband, whose death, she alleged, was due to the negligence of the defendants. Defendants denied negligence.—Mr. Marshall Hall and Mr. Ernest Pollock appeared for the plaintiff; while Mr. Macmorran, Q.C., and Mr. Whately represented the District Council, and Mr. Lewis Thomas the defendant Mauser.

It appeared that the plaintiff's husband was a gardener in receipt of 32s. 6d. per week, and, from October, 1892, down to his death in July last, resided with his wife and family at 2, Myrtle-grove, Sutton. Plaintiff's case was, in consequence of the negligence of the defendants, the cesspool, into which three houses in Greyhound-road drained, overflowed in the spring of 1895, on several occasions, and the sewage ran into her garden, and soaked into the ground. The nuisance became so great that plaintiff's husband communicated with the defendants, and asked them to see that it was abated at once. On one occasion, plaintiff said her husband had to dig a trench to prevent the sewage, which had flowed into the garden, from entering the

house. The nuisance was not abated, and, on June 14, plaintiff's husband was taken ill, and it was subsequently ascertained that he was suffering from blood-poisoning. Pneumonia supervened, and he died on July 15. Plaintiff alleged that both the defendant Mauser, who was the trustee of the houses in the Greyhound-road, and the District Council had been guilty of negligence, the former in having neglected to attend to the cesspool, and the latter in not looking after the sewer through which the sewage flowed from the cesspool into the "soak-away pit." The District Council denied that they had been guilty of any negligence, and contended that the pipe through which the sewage flowed was not a sewer, but a drain. The defendant Mauser submitted that when he heard of the condition of the cesspool he took steps to remedy the nuisance and to have the drains of the houses connected with the main drainage system.

At the conclusion of the evidence called in support of the plaintiff's case, the claim against the District Council was abandoned, and judgment was entered in their favour. As against the defendant Mauser, the jury found a verdict for the plaintiff for £300. They directed that the widow should receive £140, and the children £40 each.—Judgment accordingly with costs.

FINING THE FARMER.

JAMES FRAME, farmer, Ford Mouth Farm, Auchengray, was charged at Glasgow Sheriff Court with having, on Wednesday, January 6, forwarded to a dairyman in Glasgow eight gallons of skim milk and three and a-half gallons of cream, samples of which were taken at Buchanan-street station by inspectors Armstrong and Hamilton, and, on analysis by Mr. Tatlock, were certified to contain respectively 24 and 27 per cent. of added water. He pleaded guilty.

Mr. Frederick J. Mackenzie, writer, who appeared for the respondent, said that the presence of the water was the result of the old-fashioned custom of rinsing out the milk vessels. Frame had committed the offence through ignorance; he was a man who did not know very much about Acts of Parliament. He felt his position very keenly, and promised never to commit such an offence again. He was a very respectable man, well known in the district where he resided. As it was Frame's first offence, he asked his Lordship to impose a modified penalty.

Mr. John Lindsay, interim clerk of police, who prosecuted, said that the respondent supplied milk under a contract to a wholesale dairyman in the city, and with each delivery there was a warranty that the milk was pure. The dairyman tested the milk with a lactometer, and, suspecting that there was water in it, wrote to the sanitary office. In consequence, the milk was stopped in transit, and the adulteration discovered.

Sheriff Strachan said it was a large percentage. It might have ruined the dairyman's business. Respondent must have sufficient intelligence to know that it was wrong to water milk.

Mr. Mackenzie remarked that this was Frame's first offence.

The Sheriff said that persons were very seldom back a second time for such an offence. A prosecution had a very wholesome effect in these cases. He imposed a fine of £5 including the expenses, which amounted to £3 2s. 6d.

MEAT.

At Clerkenwell, on January 30, Frederick Clarke, butcher, of Todbee, Dorsetshire, pleaded guilty to having deposited three quarters of veal at 91, Cowcross-street, on November 20, intended for food of man, the same being diseased and unfit for human consumption. It was stated that the flesh showed strong evidence of the presence of tuberculosis. He was fined £20.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, FEBRUARY 20TH, 1897.

ANOTHER EXPOSURE OF THE "LANCET'S" LAMP COMMISSION."

THE *Lancet* still preserves a discreet silence respecting the exposures of its "Lamp Commission," so it may at length be taken for granted that our contemporary, *The Chemical Trade Journal*, has struck such terror into the *Lancet* that the latter journal finds any defence of its wretched travesty of science anent Abel's murderous 73 deg. flash-point impossible. As the *Lancet's* farcical commission was not, however, done without an object, our contemporary does well to brand the assertions made by the *Lancet* as unmitigated rubbish, having no scientific justification whatever, so that when the *Lancet's* farrago

of scientific distortions are placed before the House of Commons Committee, they may be taken at their true value and treated with contempt. In its last issue the *Chemical Trade Journal* has the following crowning exposure of the *Lancet*, and the men and cause it championed:—

"Some time back we published a most interesting communication from America, dealing with the Petroleum Question, as judged from an anti-Trust viewpoint. One of the most honourable and ardent advocates of safe oil has now been fortunate enough to secure the opinion of the Assistant Secretary of the Iowa State Board of Health, which is weighty, as it is naturally based on the principle of the Public Safety and Welfare in accordance with the State motto of *Salus populi suprema est lex*.

"In the course of a most interesting communication, this well-informed critic says:—'A careful reading of the various steps taken in the movement to protect the British people against dangerous oil forces the conclusion that the main object and purpose is how not to do it. The statements made by some of the alleged experts are simply amazing. Take Colonel Majendie, for instance. The Petroleum Committee of 1894 asked Colonel Majendie, "Have you from your experience any opinion to give us with reference to the danger (when the temperature in summer in this country happens to be above 73 deg., as it no doubt often is), of the flash-point being fixed at that temperature?" His answer was, "Of course, if that was the flash-point in an open test, there would be a great deal to be said on that subject; but having regard to the fact that it is an artificial flash-point, if I may say so, created by the gradual accumulation of vapour in a closed vessel, I do not think that any anxiety need be experienced in reference to the fact that the figure is 73 deg., whereas the temperature of the air may rise above 73 deg. Oil in barrel will not be giving off its vapour at those temperatures; it is only when oil is put into a cup and tested in this particular way that you get this flash-point of 73 deg. The original flash-point was 100 deg.; and 73 deg. represents, as near as experiments could be made to show, the equivalent of 100 deg." Asked if, with a barrel of 73 deg. oil and an atmosphere of 83 deg. and bung partly open, did he think there would be danger of fire? he answered, "No, I do not; not an exceptional risk. There always is a risk of fire with petroleum." Now, he either knows nothing of the nature of petroleum, or he wilfully states that which he knows to be false. The only question to be considered is what is the safety point for oil as used by the masses in ordinary lamps? This, of course, includes the use of imperfect lamps, negligence in use, etc. These must be taken into account because they are inevitable. In this State (Iowa) we have fixed 105 deg. F. flash test closed (Elliott improved cup). I would prefer 110 deg. F., but 105 deg. F. is far above the atmospheric conditions, the temperature of dwellings, or the temperature of oil in properly constructed and many very poor lamps. This secured, and the danger is reduced to the minimum. In this matter the cost has no place. It should not be considered at all. It never has been in this country (America). Of course, oil companies and refiners will oppose any and all attempts to restrict their traffic, and will offer all kinds of reasons therefor, and cost is one; but it is all 'buncombe.' The difference in expense between 73 deg. and 105 deg. oil is a mere bagatelle. Perhaps in no country was there a more vigorous fight made against an inspection law than was made by the Standard Oil Company in this State of Iowa. The whole force of their influence and moneyed power was thrown against it, and, as a dernier resort, they procured the stealing of the law from the clerk's desk in the legislature chamber a few moments before it was to come up for final passage. All doors in the capitol were quickly closed, and vigorous search made for the missing Bill. All business was stopped. It was subsequently found in a remote corner room, where it

PURE, WHOLESOME, DELICIOUS.

BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House and
successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK!

had been hidden, the taker being unable to get out with it in his possession. This so intensified matters that the Bill received every vote cast.

"Then followed all kinds of devices to defeat inspection by connivance with inspectors, whose removal followed for their wrong-doing. Having general supervision of the whole service on behalf of the State Board of Health, I would not relax one iota, and after *three years of fierce opposition, the Standard Oil Company succumbed*, retired from the field, and acknowledged defeat. Since then they have obeyed the law to the letter. They only ask that all other companies be required to do likewise. I recently saw a letter from the President of that company to all managers and agents, that the law, and every regulation of the State Board of Health of Iowa, must be implicitly obeyed. *We now have no trouble, and no accidents.* No oil below the standard is allowed to be sold or used. If it gets in, it is sent out of the State; hence economy suggests precaution against shipping it in.

"I do not like the Abel cup. The Heumann I like better—I have one. It is nearer the Elliott, which more closely resembles a common lamp. Referring to the open cup, I recall the fact that when the Bill was before our Legislative Committee, the Standard people sent one of their best experts with an open cup to secure its adoption. He and I were testing oil from the same can, he using his cup and I the closed cup. The committee asked him if his cup could be manipulated so as to make a difference of result with the same oil. He replied that there might be a difference of 1 deg. under some circumstances. I at once said, 'I will take your cup and demonstrate here and now a difference of 10 deg.' He refused to accept the proffer. That settled his cup. Subsequently he came to my rooms, and I showed him how it was done."

"There is no 'shrieking nonsense' about this. State officials who have been cute and persistent enough to defeat the S. O. Co. after a struggle of three years are no mean judges of the Truth, and will have been familiarised with all the possible phases of its antonym.

"Will the present Parliamentary Committee—chairman as well—please pay heed to these statements, which are deducted directly from the teachings of an actual and victorious fight for the public safety?

"There is nothing about lamps, but the oil is raised to 105 deg. flashpoint, and now there are no accidents. We only want 100 deg. in this country, and seem to have a chance of getting it, but we are now crippled on the question of *cost*. In the first place, it has nothing to do with the matter, as our American critic avers. Secondly, if the committee will only be kind enough to give a fair and willing hearing to the evidence of those *outside* the charmed clique that rules the roost, they will be convinced that this cry of *cost* is indeed the quintessence of 'buncombe.'

"It will be an everlasting slur on their intelligence if they are led away by it."

It is a painful spectacle this of the *Lancet*, printing as genuine scientific work and truth distortions of science, to bolster the aims of a set of oil monopolists who contrive murder, arson, and steal laws. When to this is added the roasting alive of a person per day in the United Kingdom by the 73 deg. Abel flash-point, we are of our contemporary's opinion that it will be an everlasting slur on the Select Committee's intelligence and humanity if they do not raise the flash-point to 100 deg. F.

NUTS AND RONTGEN RAYS.

At Clerkenwell Police Court, David Lamb, of 79, Fortess-road, Kentish Town, was summoned for exposing for sale at 88, Old-street, on December 7, 70 lbs. of walnuts which were unfit for human consumption. Richard Adams, sanitary inspector, in the employment of St. Luke's Vestry, said on December 7 he visited the defendant's shop. He saw in the window a quantity of walnuts which were mouldy on the shell. Some of the nuts were cracked in the presence of the defendant's manager. Some of the nuts were mouldy, and in some cases quite rotten. Dr. Eugene Yarrow, medical officer for St. Luke's, said some of the walnuts were decomposed while others were good. They had evidently been soaked in water in order to remove the outer skin and in that way damp had got into the skin. Cross-examined: The witness said the presence of mildew inside the shell did not prove that the nut was bad.—Mr. Bros: It is common enough for mould to be present inside walnuts. The solicitor for the defence said it would have been impossible to tell the condition of the walnuts inside the shell without the aid of the Röntgen Rays. It was proved that the nuts were purchased at 5s. 6d. a bag from Covent Garden Market. Mr. Bros said he saw the nuts on December 7, and he did not think them unfit for food. Under the circumstances he would merely order the defendant to pay 2s., the cost of the summons.

POISONED BY TINNED MEAT NEAR BARNSTAPLE.

At Chittlehampton, North Devon, on January 29, Mr. J. F. Bromham held an inquest on the body of a boy named Henry White, son of William White, a gamekeeper, in the employ of Mr. George Thorold.—The father stated that on Tuesday morning the deceased child was given a slice of corned beef from a tin, which his wife had bought of Mr. Copp, a grocer, of the village. Later in the day deceased became ill, and before Dr. Kendle could arrive from Southmolton the child had died. He had previously bought tinned meat from Mr. Copp, and it had agreed with them. A younger sister of the deceased was taken ill on Tuesday evening with similar symptoms, and she was still ill, but was a little better. His wife was also unwell.—Mr. Copp, a grocer, said he hawked with goods in a van. It was a two-pound tin he sold to the last witness, and he had sold many of the same kind to Mrs. White before. He had it from Sulley and Hibberd, wholesale merchants, in Exeter, and the brand of the tin was Libby, McNeil, Chicago. He had never previously had any complaint.—Dr. Kendle said he had examined the child, and had found evident symptoms of blood poisoning. Having made a post-mortem examination, he had no doubt that death was caused by blood-poisoning. There was no trace of any poison in the beef, but it was putrid, and therefore most injurious to health. One tin of meat might be bad out of a large quantity.—The jury returned a verdict of "Death from misadventure."

HAWKERS AND UNSOUND FOOD.

ON Thursday, at the Darwen Borough Police Court, John Turner, 16, Castle-street, and Henry Morris, Chapel-street, Blackburn, were summoned for exposing for sale, at Darwen, unsound game and fruit, on the 15th ult.—Mr. Costeker, Town Clerk, prosecuted on behalf of the Corporation, the defendants being represented by Mr. R. Riley, Blackburn.—Mr. Costeker stated that on Friday night the defendants were charged with having in their possession, and exposing for sale, certain game, fruit, and vegetables, all of which were seized by Inspector Marsden, and condemned by the magistrates. The defendants were hawkers, and their stock consisted of 20 rabbits, 100lbs. of apples, and 100lbs. of onions.—At this stage, Mr. Riley interposed, and asked the Magistrates for an adjournment for a week. He stated that Turner and Morris were employed by Mr. Bannister, and, therefore, they were only the nominal defendants. He asked for an adjournment in order that he might complete his case. He thought that he could bring evidence that the stuff was sound when purchased in the Blackburn Market on Jan. 15th.—The application was granted.

THE FLESH OF THE DOG AS FOOD.

THERE is actually nothing in the flesh of the dog that is distasteful or repulsive. Lewis and Clark, the explorers, who learned to eat it through compulsion, actually became fond of it in time. It is not generally known that it is still a favourite article of diet among certain people, but a French paper says that the number of dogs slaughtered at the abattoirs in Munich has increased amazingly in the past few months. The taste for dog's flesh is said to have been imported by Italian labourers, who have recently come in large numbers to the Bavarian capital. The meat is not only used as an adulterant for sausages, but is eaten openly, under its own name, prepared in various ways.

MANUFACTURE OF YEAST.

AT the Netherlands Yeast and Spirit Company's works in Delft, which yield nearly 100 tons of yeast per week, the first step towards the manufacture of that article is the conversion of barley, rye, and Indian corn into malt. After malting and drying in kilns, the malt is macerated in large wooden tubs and then introduced into the fermentation tubs, together with a fermenting agent previously prepared by mixing yeast and flour. After fermentation the yeast appears in a frothy state on the top of the liquid, and is conducted through channels into a common reservoir, then passed through sieves to effect cleansing. It is next collected in a milky state, and after repeated washings in clean water, transported to filter presses which remove excess of moisture, leaving a solid cake—the yeast of commerce. The spirituous liquor formed as a by-product during the fermentation process, after being drawn off and rectified, is bottled and sold as Hollands gin.—*Engineer.*

A FARMER AND HIS MILK.

JOHN GREEN, farmer, of Dewsbury Moor, and George Green, a milk dealer, of Dewsbury Moor, employed by Green, were each charged at Dewsbury with having sold milk containing 20 per cent. of added water, and from which 10 per cent. of butter fat had been abstracted. They pleaded not guilty.—The Town Clerk, Mr. G. Trevelyan Lee, prosecuted, and Mr. F. Dwyer defended.—Mr. Lee said that on December 14 Inspector Thackray obtained a pint of milk from George Green, in Brook-street, for which he paid 1½d. He told him it was for analytical purposes, and gave him a portion of the sample back in a bottle. The proceedings were taken under Section 6 of the Food and Drugs

Act.—James Thackray bore out these statements, and the analyst's certificate was produced.—The Inspector, cross-examined by Mr. Dwyer, said it was about 11 o'clock when he saw him. Defendant had more than a quart of milk in the can at the time. The bottle was sealed in the usual way. He was taking other samples from milkmen that morning.—Mr. Dwyer said that for 20 years his clients had supplied milk to local people, and although samples had several times been taken they had never been summoned. The milk was put in the cans and taken to Dewsbury within half-an-hour of the cows being milked, so that it was impossible for cream to have been abstracted, as it could not have risen. A fair sample of milk contained 90 per cent. of water, and he contended that in this case there had not been more than that amount. He also submitted that the seller only could be proceeded against, and with this Mr. Ridgway (the clerk) agreed.—John Green said his brother worked for him and was paid a weekly wage. He had never, since he began business, abstracted cream from the milk. His two sons and himself milked the cows, and put the milk straight into the cans. Between the time of milking and taking the milk to Dewsbury, only half-an-hour elapsed. If he had wished he could not have abstracted cream; and he did not add water. Rich milk was not to be obtained at this time of the year, and as the milk was sold out of the can it got poorer.—By Mr. Lee: He looked in the cans before the milk was put in, and they were perfectly dry.—George Green said he had only about a quart of milk in his can when the samples were obtained. He had often had samples of milk taken for analysis. He was there when the cows were milked that morning. Not more than half-an-hour elapsed between the milking of the cows and his starting for Dewsbury. No one could get in the yard to put water in the cans. He did not put water in, nor did he abstract cream.—Percy Green and Arthur Green, sons of John Green, also said that they were present at the time, and there was no water added or cream abstracted. Owen Richardson, scholar of Trinity College, Cambridge, and who had passed first in chemistry in England, said he had seen the report of the analyst, and according to his figures there had been no cream abstracted. The fat in unadulterated milk could be as low as 2.5, and the fat in the sample was 2.67, so that the proportion of cream was greater than it need be.—By Mr. Lee: He had not had much experience in analysing milk.—After some consideration, the Mayor said that taking into consideration the fact that the defendants had been in business for 20 years without having been convicted, they would give them the full benefit of the doubt. The case was accordingly dismissed.

DISEASED PORK FROM EAST ANGLIA.

AT the Guildhall (London) Police-court, on 27th ult., Albert Whitta, of Methwold, Brandon, was summoned, at the instance of the Commissioners of Sewers, for sending the carcasses of two diseased pigs to the Central London Market, intending them for sale as human food.—Mr. Vickery prosecuted, and Mr. Walter Beard represented defendant.—It was stated that defendant was a retired tradesman, and dealt in pigs, which he sent to London. Last month he sent four pigs to a salesman in the London market, and it was discovered that two of them were in a very diseased state.—The inspector, who seized the carcasses on the 21st ult., said they were in a wet and emaciated condition from disease. The kidneys and flare had been cut away, and the ribs showed signs of very acute inflammation. The weight was 124lbs. He submitted them to the Medical Officer of Health, and they were subsequently condemned by Mr. Alderman Halse, who ordered the case to be reported.—Edward Norton, butcher, of Brandon, deposed to killing the pigs for the defendant at his farm. Defendant's steward showed

him the pigs, and he dressed them. He noticed that all the pigs had bad livers, and two were worse than the others. The kidneys had grown to the side of one of them. Defendant saw the condition of the pigs. Witness told him that he had never seen such a thing before. He knew there was something wrong.—Cross-examined: He did not consider the meat bad, and thought it all right for consumption.—Dr. W. Sedgwick Saunders, Medical Officer of Health for the city, said the meat was totally unfit for human food. The carcasses weighed about half what they should have done, with such a frame. It was in a very nasty condition.—A labourer in the defendant's service said his master had a farm of 180 acres, and bred poultry, game and rabbits for the market. He did not send up much meat.—Mr. Walter Beard said his client was a highly respectable man, and would be the last to knowingly send diseased meat. It was not usual for him to send meat, but having these pigs, and not knowing what to do with them, he sent them to London. He did not trust to himself, but to the butcher, to judge as to whether the meat was bad. Mr. Beard submitted that the meat had very likely got worse in transit to London. His client had occupied the position of churchwarden and overseer of the place where he lived, and was looked upon as a man of integrity.—Mr. Alderman Samuel acquitted the defendant of knowing the meat was bad, but said the responsibility rested upon him. The Legislature regarded it as a bad case, and he would have to pay £10, and £4 4s. costs.

HOW PIGS ARE FATTENED.

A DIET OF DUST AND RUBBISH.

AT North London Police Court, on January 27, Mr. William Stevens, of Chillman's Farm, Hackney Marshes, was summoned at the instance of the London County Council for carrying on the business of a slaughterer of swine without the Council's license and permission.

Mr. Collman prosecuted for the Council; Mr. D. A. Romain defended.

Mr. Collman said that there were three summonses—(1) for unlawfully establishing anew, without the sanction of the Council, the business of a slaughterer of cattle; (2) for carrying on the same; and (3) for using premises for this purpose without a license. The defendant's farm adjoined the Hackney Marshes, and evidence would be called to show that from time to time defendant had slaughtered a number of pigs and sent them to market.

Mr. Romain raised the preliminary objection that the Council had absolutely no authority to initiate these proceedings. The Act specially stipulated that the proceedings should be taken by the sanitary authority, and the authority in this instance was the Hackney Vestry. Though the London County Council had authority to legislate in the making of bye-laws under the Public Health Act, he contended that they had not any power to prosecute. Having heard Mr. Collman

on the point (the contention being that anyone could move the law in the matter), Mr. Bros said that he should hear the evidence, but he would reserve the point that had been raised.—Evidence was then given to show that on November 26 a dozen carcasses of sows recently killed were found in a shed on the defendant's farm.—For the defence it was contended that for probably 100 years the farm had been carried on as a pig farm; that it was the only farm of its kind in London; that it extended over 40 acres, and was surrounded by hundreds of acres of marsh land.

Defendant was called as a witness. He said that he kept pigs on the farm, which was used as a dust-shoot, in order that they might eat up the rubbish and keep the place a bit tidy. They had a little other food, and were killed directly they got fat. He always bought them poor.

Mr. Bros said that if he were to express his own opinion he should say that it would be a good thing if pigs were not kept at all on the farm. It was not a very pleasant thing to think that pigs which were fed on the filth of a dust-shoot were killed and sent to market. He should convict the defendant for carrying on a slaughter-house without a license, and impose a fine of 40s. The magistrate agreed to state a case on the point of law raised by Mr. Romain.

"ABSOLUTELY INDIGESTIBLE" SWEETSTUFF.

AT Marlborough-street Police-court on January 28, H. Cooper, a small shopkeeper, of Grosvenor-mews, W., was summoned for selling an article of food (to wit, cocoa-nut sticks) adulterated with 16 per cent. of paraffin wax.—Mr. Hitchens, solicitor, who prosecuted on behalf of the Vestry of St. George's, Hanover-square, stated that the paraffin wax on the confectionery in question (a sample of which was produced) was exceedingly dangerous to eat, being absolutely indigestible. Prosecutions against other persons had taken place in the North of England. In defence, Cooper said that he sold the sweetstuff just as he bought it.—Mr. Hannay: You must buy no more of it, or if there is a demand for such a sweet you must get it from some person who makes it up innocently. It is injurious to health and a serious matter. You will have to pay a fine of £2, with 12s. 6d. costs.

LET JACKASSERIE BE HEARD.

THE USE OF SALT.

"As it is now getting on for a year," says a Mr. P. H. Echlin, in the *Echo*, of January 26, "since I wrote to you giving my experience of living without common salt, and as it was authoritatively settled in the *Echo*, by someone signing himself, 'Elfin,' that I could not long survive such a deprivation, it may interest some to know that, from that time to this, I have not added a particle of salt in cooking, or at meals, except upon one occasion, when by intention I slightly

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salted some macaroni, with the result that I had an attack of acute indigestion and other very unpleasant symptoms for some hours. I have eaten precisely similar foods to those taken by other people, with the exception of flesh meat (flesh, fowl, and fish), avoided because I see nothing but injustice about it, and I have relished my meals quite as much as when salted. I may mention that I steamed whatever admitted of doing so, and found it vastly improved in flavour and effect by that process. That my health has been a gainer by unsalted food I cannot doubt, and that I have no longing for the condiment can safely be said."

MEDICATED WINE PROSECUTION AT STRATFORD-ON-AVON.

AT the Stratford-on-Avon Borough Police Court on January 28, Mr. James William Walker, grocer, of Henley-street, was summoned for selling "orange quinine wine," not of the nature, substance, and quality demanded, contrary to the provisions of the Food and Drugs Act. The prosecution was at the instance of Mr. F. G. Bennett, County Council inspector, who relied for his case upon a certificate by Dr. Bostock Hill that there were nine grains per pint of added salicylic acid in the wine submitted to him.—Mr. S. C. Warden, who defended, explained that the substance was sold as it was received from the manufacturers, Messrs. Lorrimer and Co., of London. It was made in accordance with the prescription in the British Pharmacopœia, with the addition of the salicylic acid, which was an antiseptic to prevent fermentation, and was not harmful to health. A number of witnesses to this effect were mentioned as being in court, including Drs. Nason, Greene, and Ross, of Stratford; Mr. Desch, Bachelor of Science; and a member of the firm of Lorrimer and Co., as well as the defendant.—After hearing Dr. Nason and Mr. Lorrimer, the magistrates dismissed the case, saying they considered there was no fraudulent intent, and nothing in the compound injurious to health.—It was stated that the wine has been analysed at least a hundred times previously by public analysts without complaint.

ADULTERATED MILK.

ROBERT J. BEECROFT was summoned at Hull Police Court on the 28th ult., under the Food and Drugs Act, for selling milk adulterated with 6·12 per cent. of added water on December 23. There was also a second summons for selling milk on the same day (a second can) adulterated with 8·48 per cent. of added water.—Mr. Duncan (Town Clerk's Department) prosecuted, and Mr. E. A. Laverack represented the defendant.—Mr. Laverack said he must admit a technical offence, but the defendant had no knowledge whatever of the adulteration. The business had been in the family for over 100 years, and the defendant had been very much distressed to find that this milk, which came from his farm at Hollym, near Withernsea, was not of so good quality as it should have been. He had used every endeavour to ascertain the cause, but had been unsuccessful.—His Worship said that this would operate on his mind in imposing the penalty. He should order a fine of 10s. and costs on the first summons, and a nominal penalty of 1s. and costs on the second.

ROBERT LAWRENCE, of Granby-street, Hampstead-road, was summoned before Mr. Curtis-Bennett on Jan. 28, at the instance of the Paddington Vestry, for selling milk deprived of 30 per cent. of its cream.—Mr. Dennis prosecuted, and Mr. Ricketts was for the defence.—A sample of the milk was obtained by Thomas Parker, the inspector, who paid three half-pence for a pint. The defendant has no shop, and was selling his milk in Leinster-street, Paddington. After the purchase the defendant, who knew the inspector, wanted to make out that he was selling skim milk. A

man who had just previously purchased milk heard the defendant's explanation, abused Lawrence for selling him skimmed milk at 3d. per quart when the price everywhere was 2d. a quart. The inspector had obtained samples of the defendant several times, and in August last he was fined £5 with 12s. 6d. costs.—The defence was that the inspector knew the defendant was selling skimmed milk. There was no fraud in the case, for the article contained 70 per cent. of fat. The public could purchase new milk at 4d. or 5d. a quart, separated milk at 3d., and skimmed milk at 2d., and nobody was injured.—Mr. Curtis-Bennett convicted the defendant, and fined him £10 with 12s. 6d. costs, or two months' imprisonment. Time was given him in which to pay.

HOW TINNED FOOD POISONINGS ARE SQUARED.

It appeared from the proceedings of the Health Committee of the Bootle Town Council that the request of the Secretary of the Liverpool Chamber of Commerce, asking for full information with regard to the alleged poisoning by tinned meat for the London Chamber of Commerce, had been refused, the Town Clerk having been instructed to write back saying that they were not at liberty to supply the information required.

When the minutes came up for confirmation, Councillor Henry asked if he was to take it, or were the public to take it, that the Health Committee were not prepared to assist the health authorities? If the Committee was withholding the information asked for, he wanted to know what was their reason. To put it bluntly, he asked if there was any member of the Council involved in exposure.

Councillor Brewster, vice-chairman of the Health Committee, said the Town Clerk would be the best person to explain the matter.

The Town Clerk replied that the name of no member of the Council had been mentioned in connection with the matter.

Councillor Henry: Is any member of the Council involved in that investigation?

The Town Clerk: No, not in the slightest. It did not appear to the Health Committee that there was any reason why they should furnish information on this matter to the London Chamber of Commerce.

SEIZURE OF POLLUTED FOOD.

DR. COLLINGRIDGE, medical officer of health, Port of London, visited the steamship *Hawk*, lying at Deptford, on Feb. 10, seized as unfit for food about 1,800 carcasses of pigs and 25,000 rabbits. The vessel was sunk a week since in Barking Reach, and the food thus seized had been lying in sewage-polluted water for nearly five days.

LIMEHOUSE AND DISTRICT BOARD OF WORKS AND ADULTERATION.

THE report of the analyst for the quarter ending December 31, 1896, states that samples were taken of butter, milk, pepper, mustard, coffee, oatmeal, cornflour, and porter. One sample of milk was adulterated with 12 per cent. of water, and the seller was fined 20s. and costs. The vendor of another sample of milk, to which 7 per cent. of water had been added, was fined 5s. and costs. A sample of "butter" was found to contain 97 per cent. of foreign fat, and the seller was fined 30s. and costs. The vendor of another sample, containing 59 per cent. of foreign fat, was mulct in £10.

Several members commented on the great difference in the two penalties for the adulterated butter.

DEATH OF A PUBLIC ANALYST.

WE regret to record the death of Mr. Charles Henry Southwell, public analyst for the parts of Holland, Lincolnshire, on Feb. 8, very suddenly. He was in his fiftieth year and unmarried. He held his appointment under the Lincolnshire County Council for about four years. He was also appointed analyst for the same district under the Fertilisers and Feeding Stuffs Act.

THE CITY OF BELFAST AND THE SALE OF FOOD AND DRUGS ACT.

THE report of the public analyst, Professor John F. Hodges, F.I.C., states that in the quarter 121 articles of food and drink, etc., have been submitted to him for analysis, under the Food and Drugs Act, viz.: Sweet milk, 78 samples; buttermilk, 19 samples; butter, 6 samples; coffee, 4 samples; ginger, 4 samples; mustard, 5 samples; cheese, 1 sample; whisky, 1 sample; cream of tartar, 3 samples.

Of these 13 articles were found adulterated, viz.: 7 samples of sweet milk, 4 of buttermilk, and 2 of butter; and in addition to these, 5 samples of sweet milk were found of poor quality.

In the year, from February, 1896, 505 articles have been examined, and 69 articles reported by him as adulterated, or of poor quality. Fines amounting to £97 12s. 6d. have been inflicted by the Bench of magistrates.

The collection of samples, as in former years, has been attended to with great care and accuracy by the Food Inspector, David M'Master.

KESTEVEN COUNTY COUNCIL AND ADULTERATION.

MR. CHAS. E. CASSAL, the county analyst, reported that during the quarter ended December 31 twenty samples of food had been submitted, of which seventeen were genuine, two adulterated, and one of inferior quality. Proceedings were taken in the cases of adulteration, and fines imposed.—The following persons were appointed inspectors under the Sale of Food and Drugs Act.—Superintendent G. Cabourne (Grantham division), Superintendent C. Clarke (Lincoln division), and Inspector Swaby for Stamford borough.

THE ANNUAL DINNER OF THE SANITARY INSPECTORS' ASSOCIATION.

THE fourteenth annual dinner will take place in the Venetian Saloon, Holborn Restaurant, on March 6, 1897. The occasion promises to be one of more than usual importance. Amongst those who have signified their intention to be present are:—Sir Arthur Arnold, Sir James Crichton Browne, Sir J. Blundell Maple, M.P., Dr. Farquharson, M.P., E. H. Pickersgill, M.P., Professor Attfield, Professor Crookshank, Professor Corfield, The Master of the Worshipful Company of Carpenters, General Moberley, Wyke Bayliss, Esq., Dr. Shirley Murphy, Dr. J. Milson Rhodes, J. Pridgen Teale, Esq., Dr. Arthur Newsholme, Dr. P. de Pietra Santa, C. Nicholson, Esq. (of Paris), F. O. Crump, Esq., Q.C., Dr. E. C. Seaton, The Editor of FOOD AND SANITATION, the Hon. Council and Solicitor, etc. The energetic hon secretary of the association, Mr. Tidman, whose address is Connaught Mansions, 34, Victoria-street, London, S.W., will no doubt be pleased to hear from sanitary inspectors who wish to be present.

PERTH AND ADULTERATION.

MR. TATLOCK, Glasgow, the City Analyst, reports that, during the quarter ending 31st December last, he received 10 samples for analyses, consisting of 5 of

milk, 2 of butter, 2 of whisky, and 1 of cream of tartar. All the samples were found genuine with the exception of the sample of cream of tartar, which contained 2.49 per cent. of sulphate of lime, says the *Dundee Advertiser*. If it be true that Perth only sent 10 samples for analysis last quarter, those responsible ought to be thoroughly ashamed of themselves. It is "burking" the Adulteration Acts, and a direct incentive to fraud. We have seen it stated that in the whole of last year only 28 samples of food had been submitted for analysis. Surely the local press ought to have something to say about this.

HASTINGS PUBLIC ANALYST'S REPORT.

THE report of the Public Analyst (Mr. H. F. Cheshire), states:—During the year 1896, I have received from your authority 44 samples of food for analysis, and although there has not been wanting articles of a most suspicious character, especially milk, in no cases have I thought desirable to return them as adulterated. The 44 samples are made up of: 24 milks, 8 whisky, 8 butter, and 4 lard, equally distributed amongst the quarters. The work of public analysts has been rendered more difficult by a decision in the higher courts to the effect that the reasons for the conclusions must be stated. The giving of the details and fixed standards is always against intelligent work, and it will rarely be difficult to find some analyst who prefers a different method to that adopted by the local one, and by calling him for the defence, render dismissal at least possible.

Mr. Cheshire seems to know a thing or two. We have come across some who, by preferring a "different method" and chaotic chemistry can classify semiputrescent gelatine into pancreas peptone and albumose peptone. Pity 'tis, 'tis true.

THE MEAT NOTICE DODGE.

AT Clerkenwell Police-court, on Feb. 10, Walter Hayes, a butcher, of Hinton, near Wells, Somerset, was summoned for depositing for sale, on Dec. 19, at the shop of Mr. Palmer, in Charterhouse-street, Smithfield, four quarters of beef that were unfit for the food of man. Mr. Matthew Hall prosecuted on behalf of the Holborn District Board of Works. The meat was condemned by Thomas Billing, sanitary inspector, who said the four quarters were parts of a cow that had died a natural death. The flesh was flabby, and, in his opinion, the cow had suffered from inflammation of the kidneys. The defendant said that the heart and lungs of the animal were healthy, but the meat was badly dressed. He bought the animal after it had broken its neck in a stall from a Mr. Bond for £1. A note was placed inside the hamper containing the meat stating that the beef was to be sold subject to the inspector's examination. Mr. Horace Smith: I view these notes with grave suspicion. I am of opinion that these notes are put in the hampers for the purpose of fraud, with the intention of protecting the farmers in case the inspector should seize the meat. I have said so before, and I should think it would have been generally reported throughout the country by this time. I shall impose a fine of £10.

MARGARINE.

AT Watford Petty Sessions, William Ashby, grocer, of Watford, pleaded guilty to selling margarine for butter at Watford on January 18; further, with failing to conform to the regulations of section 6 of the Margarine Act.

William Grasswell Rushworth stated the facts of the case, which were to the effect that on the day in question he purchased a pound of rs. butter from defendant's shop, and afterwards found it to be margarine. Defendant, when accused of the offence,

admitted that it was margarine. Witness also drew defendant's attention to the fact that it was not labelled, and that it was served in a wrapper which also had not the word "margarine" printed on it.

Defendant admitted the offence, but stated that it was a mistake, the rs. butter having been put in a different place.

In answer to a question, Mr. Rushworth stated that when analysed by Mr. A. E. Ekins at St. Albans the mixture was found to contain 25 per cent. of butter only.

A fine of £1, and costs £1 12s. 6d., was imposed.

SPIRITS.

JONES v. THOMAS.—The important case of Jones v. Thomas came on again in the Pontypridd Police Court on January 27, it having been remitted from the High Court with a notification of their lordships' judgment respecting the insufficiency of a notice posted in a public-house bar to the effect that "all spirits sold in this establishment are diluted." It was pointed out by Mr. Allen, solicitor, Cardiff, who appeared for the prosecution, that this was a new point decided by the High Court upon the question of labels, and it was of a revolutionary kind, it being formerly understood that a notice hung up in a room was sufficient protection. The rum in this case was 42½ degrees under proof, whilst Section 6 of the Act of 1879 provided that a good defence could be presented where it was proved that the spirits sold were not more than 25 degrees under proof. The Bench now held that the rum was sold to the prejudice of the purchaser, and the Stipendiary imposed a fine of £1 and costs.

REVELATIONS OF THE BEER TRADE.

AT Southwark, on February 3, before Mr. Paul Taylor, Thomas William Cooper, of the Wellington public-house, Tarn-street, Newington, was summoned at the instance of the Excise Authorities for diluting porter. Mr. Denny, barrister, prosecuted; and Mr. Bodkin, barrister, defended. Mr. Denny said the dilution was 1·9 per gallon per barrel of 36 gallons. Mr. Bodkin said it was the practice at this house, as throughout the trade, to put the waste from the various taps at the bar into the porter. The waste being of a lower specific gravity than the porter, it made it weaker and thus caused the dilution. Mr. Denny said the analysis showed that if waste was added it must have been diluted with water. Porter was of lower specific gravity than any other beer, so that if merely waste was added the gravity would be increased. Mr. Paul Taylor: Does beer lose gravity by exposure to air? Mr. Denny: No; but probably the rinsing from glasses had been utilised. Mr. Paul Taylor fined the defendant £5 and £3 ss. costs.

WHAT HAVE CHEMISTS AND DRUGGISTS TO SAY ABOUT THESE WRETCHED OPINIONS OF THE "PHARMACEUTICAL JOURNAL" ON THE PURITY OF FOOD AND DRUGS?

"It has come to be regarded as a necessary evil in these degenerate days that the British taxpayer should be freed as much as possible from the necessity of initiating self-protective measures. Hence the enactment of Statutes directed against the exercise of individual discretion—by teaching people to rely more and more on elected bodies and their paid agents—is hardly to be wondered at. As a result of this system the individual gradually becomes unaccustomed to act for himself in certain directions, and ultimately he may be

rendered unfit to protect himself entirely. In no instance is this tendency so strongly marked as in connection with the purity of food stuffs and drugs. There is some reason to believe that, years ago, sophistication was practised to an extent that can hardly be conceived as possible to-day, and that the worst case of adulteration occurring at this latter end of the nineteenth century would have been regarded as an exceedingly mild one in earlier times. And yet, in spite of this, people thrived in those days and transmitted to their descendants at least as good physical constitutions as they inherited. The reason is, perhaps, not far to seek—our ancestors who were fit to survive carefully avoided inferior, sophisticated stuff. Not that they organised any such elaborate system as obtains now, or that, as individuals, they were capable of acting as their own analysts and adulteration detectors. The means resorted to were such as were bound to fall out of use sooner or later, because they were too simple. The purchaser who wished to avoid shams paid a fair price for what he wanted, at a place where experience had led him to expect he could depend upon procuring a sound article, and—human nature being such that sellers prefer on the whole to walk straight so long as they are not beaten down and worried about the means of existence—the purchaser was not often disappointed.

"This old-fashioned plan—as old as human society—is practised by some people even now, in spite of the fact that they are perforce obliged to contribute towards the expense of maintaining an army of spies and analysts for the protection of weaker elements in society. The latter, by continually buying in the market where the lowest price prevails, offer a premium to competition, of which, according to John Bright, adulteration is a form; they thus wage an unceasing war with shopkeepers, who, owing to lack of union in their ranks, are sooner or later ground down to bottom prices, and even lower, the sale of inferior and adulterated goods then taking place as a natural corollary. In the ordinary course of events this state of affairs would soon right itself, as the consumers of less pure and nutritious articles would be less fitted to survive than those who declined to ruin their health and stamina even to save their pockets. But false humanitarian motives have come into play at this point, and the best of our race must needs be taxed to help maintain the most incapable alive. Moreover, the ranks of the helpless soon swell, as those in the borderland between the naturally dependent and independent lapse into a worse condition rather than a better. The result is that, at the present time, many thousands of naturally generous-minded people, who would have been quite capable a quarter of a century ago of protecting themselves in the matter of food and drugs, have become comparatively helpless in that respect. Thoughtlessly trusting to the Adulteration Acts for protection, such people are deluded into the belief that all foodstuffs and drugs they see exposed for sale, however low-priced, must be genuine, and therefore as fit for the desired purposes as the more expensive articles. It is not surprising then that the sale of goods just good enough to meet official requirement increases, and the public is worse off generally than at the time when adulteration was more openly and extensively practised. The difference between good and bad was then strongly pronounced, but now we have one gradually shading off into the other, and the medium or second-rate article sells best of all.

"All this must, of course, be of very great disadvantage to the public; but, unfortunately, the retrograde tendency of grandmotherly legislation results in moral emasculation, and the development of a somewhat invertebrate type to which the support afforded by the ingenuity of tinkering legislators becomes a necessity. Accordingly the worse the evil becomes the more we must legislate, establish standards, and worry the shopkeeper who depends upon the trade of the in-

capable, on all hands, until the quality of his wares is maintained at a dead-level of uniformity, and that the minimum point. Last year a Select Committee on Food Products did its best to ascertain how existing Acts could be modified to the public advantage, and, so far as making the best of a bad job goes, the report of that Committee indicated what are probably the best means of remedying certain defects. But whether the members of the present Government disapprove of the means suggested, or object on principle to the regulation of the quality of food by legislation, when it is such an easy thing for everyone to regulate it for himself, there appears to be no immediate intention on the part of those at present responsible for the direction of public affairs to take part in the tinkering process. In spite, therefore, of the clamours of Mr. Kearley and his supporters, who, for reasons best known to themselves, attempt to make capital out of the situation, the Government does not intend to move in the matter at present. We must own to a lingering desire that if anything is to be done at all, the Government should act directly in the matter. We should like also to see legislation respecting drugs separated from that dealing with food-stuffs. But, on the whole, there is not much to lose from keeping the whole matter open for some time longer, even though public analysts may continue to lament the lack of satisfactory standards, and the public require to look better after their own interests."

Thus the *Pharmaceutical Journal* of January 30. Pharmacists are to be commiserated on having such spokesmanship. For our part we do not believe these are their opinions. We know so many of these honest men in whom this *caveat emptor* rubbish (really a plea for public pillage and dangerous drug adulteration) will evoke only intense disgust that a responsible journal, claiming to voice the pharmacist's cause and his ideals, should hold the pharmacist up to the public in so unwarranted and contemptible a light.

COLONIAL COMPRESSED VEGETABLES.

THERE has recently been an important test made of sample supplies of Tasmanian compressed vegetables at the Royal Victualling Yard, Deptford. The object of the test, says the *Fruit-grower, Fruiterer, and Florist*, was to show the suitability or otherwise of these compressed articles of food for Admiralty purposes. From the report which was made by the experts who conducted the tests we learn that the samples of compressed vegetables left Tasmania on July 17 last, and on arriving in this country in September were tested. They were first soaked over night (according to the directions on the labels), and a portion cooked in the usual manner. In order that comparative tests might be made, a sample of the compressed vegetables used in the English navy, and which are entirely supplied from France and Germany, was also cooked; and, in order that the conditions should be equal, the samples from the Colony—which consisted of cabbage, carrots, and turnips—were mixed, as only mixed vegetables are used in the Admiralty.

As parsnips, for some reason or other, were not included in the foreign supplies, the Tasmanian sample of that vegetable was consequently not tested. Although it must be said that every consideration was shown to the Colonial vegetables, the result was by no means satisfactory, the comparison with the Continental sample being very much to the disadvantage of the former; as, irrespective of their inferior appearance, those from Tasmania were found to be not only somewhat tasteless, but tough. Another great disadvantage lies in that it is necessary for the Colonial vegetables to soak for a few hours. This in itself would be sufficient for any supplies to be condemned by the Admiralty, it being simply impossible for this to be done, even if the water could be spared on board a

troopship, where there are perhaps 1,000 or more people to be catered for. Again, some of the Tasmanian vegetables were found uncooked after more than two hours' boiling. On the other hand, the foreign article can dispense with the soaking, and the sample tested was ready after half-an-hour's cooking. The advantage of this latter will readily be appreciated when the condition under which the stores are used is considered.

Mr. Miller, the Director of Stores, who conducted the examination, stated his intention of advising the Admiralty Board to give instructions for a sample tin or two of the kind now used by them to be forwarded to the Agent-General, to be sent to Tasmania for the examination of those interested; and should this be done, it will be an invaluable aid to the manufacturers in striving to obtain the necessary excellence. It will also be found that the different vegetables are very finely cut, and of good colour.

The portions of cabbage in the Continental cake are of suspiciously bright green colour; but this has been subject to searching analytical tests at the Government Laboratory, with the result that it has been found entirely free from chemicals. This colour strongly contrasted with the Colonial cabbage, which looked like rank tobacco leaves. The Continental cakes have also a small quantity of onion, and are spiced with a herb. For Admiralty requirements this flavouring would have to be introduced into the Colonial supplies; but the utmost care would have to be taken that too much is not put in, for the slightest indication of over-seasoning would be sufficient for condemnation.

The general opinion of the testing experts present was that, although the vegetables were utterly unsuitable in their present condition for Imperial requirements, it was probably due to want of proper method in manipulation, the vegetables themselves being of good quality.

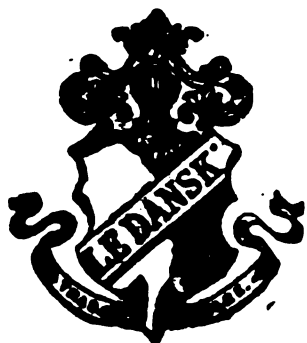
The vegetables have also been tested separately by having them prepared for the table. The result was practically the same as when mixed they proved rather tasteless, and certainly tough. This latter fault is probably due to old vegetables being used. The cabbage could not be tried on this occasion, the sample being mildewed.

These compressed cakes, for Admiralty use, have to be packed in tins of size and shape according to the requirements of the service and country, it being simply fatal to send such stores long sea voyages in paper wrappings. Care has also to be exercised that the vegetables are properly cleaned. The portions of Colonial carrots were extremely bad in this respect, as sufficient of the outside had not been scraped off. The result was that when cooked they had a dirty, blackened appearance, which certainly was not a recommendation.

It is thought by some that probably, so far as the Imperial Government is concerned, this is a dying trade, as the only service on which these compressed vegetables are now used is on board the troopship; and for the future the transports will be under contract with the larger shipping companies, whose steamers, built for passenger service, have larger cool chambers for carrying fresh vegetables than the old Government boats (which are rapidly being put out of the service as obsolete), compressed or preserved vegetables will possibly not be required. But this is open to question; besides which, there is the possibility of a trade being opened up in such countries as India or some of the hotter countries possessing mining camps.

In conclusion, we would say that it is quite clear that the Colonies have much to learn before serious competition with the Continental supplies of these articles can prove successful. Our foreign competitors have learnt the art of cleanliness, tasty arrangement, flavouring, and successful compressing, and seem likely, we regret to say, to keep the field for these goods some time to come.

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Food and Sanitation.

SATURDAY, FEBRUARY 27TH, 1897.

CONDENSED SKIMMED MILK.

SINCE we began the agitation a few years ago for the proper labelling of condensed milks, this question has come to be seen by enlightened grocers in its true light. Against the skimmed milks for use with tea we have nothing whatever to say: it is their use for infant feeding to which we objected so strongly five years ago, and it is gratifying to this journal to find that where it once fought alone, its supporters and converts now number thousands who have the influence to bring about legislation on this important question. We sowed the seed and the crop is now rapidly ripening. At the last meeting of the Northern Grocers' Council at Manchester, Mr. John Williams, president, said: "He wished to draw

PARISH OF ST. MARY, ISLINGTON. SANITARY INSPECTOR.

The Vestry of the above Parish, as the Sanitary Authority under the Public Health (London) Act, 1891, being about, on the 19th March, to appoint a Sanitary Inspector for District No. 12, the Public Health Committee is prepared to receive applications for the office.

The salary will commence at £130 per annum, payable monthly, with an annual increment of £6 to a maximum of £160. Uniform, cap, and clothing will be supplied.

The person appointed must reside in his district and devote the whole of his time to the service of the Vestry, and will not be permitted to engage in any other occupation.

Candidates, who must not be less than 25 years of age nor more than 40, must make application in their own handwriting, upon the form provided by the Vestry, stating their age, trade, and qualifications.

Candidates must be holders of a certificate of such body as the Local Government Board may approve, unless they have been, during three consecutive years preceding the year 1895, a Sanitary Inspector or Inspector of Nuisances of a district in London, or of an urban sanitary district out of London containing, according to the last published census, a population of not less than 20,000 inhabitants.

The applications, enclosing copies of not more than three testimonials of recent date, must be sent in to the undersigned before noon on Friday, March 5th.

Candidates selected will be written to and informed when they are to attend the Committee.

The appointment will be subject to the approval of the Local Government Board, and to the medical examination of the person proposed to be appointed of his constitutional fitness for the position.

Canvassing will be deemed a disqualification.

Vestry Hall, WM. F. DEWEY,
Upper Street, N., Vestry Clerk.
23rd February, 1897.

their attention to the Manchester committee's approval of the labelling of condensed skimmed milk in large and legible type, as recommended by the Select Committee. He had always held that grocers, as retailers of food, had a good deal of responsibility resting on their shoulders in seeing that their customers were served with what they asked for, and that they ought not to seek to get rid of such responsibility in being a party, in any shape or form, to deluding the public. Some of them might be purveyors of this condensed skimmed milk, and the public ought to be made aware that it was skimmed milk and nothing more, for the labels which stated it to be skimmed milk required a microscope to read them, and he was glad, therefore, that the Committee of the Manchester and Salford Grocers' Association had in their report called attention to the fact that they regretted the Select Committee had not thought the labelling of condensed milk, although included on page 25, paragraph five, of their recommendations, of sufficient importance to include it in the summary of their principal recommendations."

This straightforward opinion was received with applause. It is a testimony that grocers wish to deserve well of the public at large.

A VERY LAUGHABLE PROCEEDING OF THE LONDON CHAMBER OF COMMERCE.

MR. KENRIC B. MURRAY, secretary of the Chamber, writes:—

"I am directed to inform you that the Council of this Chamber has recently appointed a Special Committee (with power to add to their number) to enquire into and report upon the subject of the pernicious practice of giving and receiving secret trade Commissions.

"A preliminary meeting was held on February 2, when Mr. David Howard, one of the Vice-Presidents of the Chamber, was elected Chairman, and Mr. Walter Hazell, M.P., Deputy Chairman.

"In order that the Committee may have the fullest information before it, I am desired to make it known through the medium of your valuable columns that the Committee are willing to receive and consider con-

fidentially any evidence or information on the subject which anyone may be disposed to bring before it.

"I am further desired to invite confidential communications to be addressed to me by letter, or to be made to me verbally to be laid before the Committee, and to say that no communication or information will be given to the Committee without the previous consent of the party forwarding the same.

"I have also to add that any communications or information which may be given to me will be treated in the strictest confidence, and no names or particulars will, unless authorised, be allowed to transpire, even in Committee."

If the Chamber of Commerce really desires to investigate the pernicious practice of giving and receiving secret trade commissions, it had better begin with an enquiry into itself. Its mineral oil section, for example, could give it enough in bribery and jobbery to investigate for a considerable time to come. It would be hard to match this London Chamber of Commerce enquiry for cant, unless we had Abdul the Damned denouncing murder, or Shylock declaiming against usury.

APPOINTMENT OF ANALYST FOR BLACKBURN.

THE Local Government Board have approved the appointment of Mr. W. Collingwood Williams, of Liverpool, as analyst of the Blackburn Corporation under the Sale of Food and Drugs Act.

A PROTEST AGAINST SIR "EXPERT" BRAMWELL.

MESSRS. CARTER, C.E. (Sanitary Engineering Company), E. Tidman, C.E., F.S.I. (London and Suburban Sanitary Survey Association), and A. E. Hubert (Banner Sanitation Company), write: "As a matter of public interest we have thought it our duty to call attention to the present action of some of the London water companies in serving notices on owners of houses to take out their 3-gallon flushing-cisterns and to substitute 2-gallon cisterns. Although the water companies' regulations only permit a 2-gallon flush, the regulation has not been hitherto strictly enforced, at any rate, not in the better class of houses. As experienced sanitarians, we have been in the habit of recommending 3-gallon flushing cisterns, being satisfied that a 2-gallon flush is not sufficient to clear the closet trap and drain, however perfect their construction; and it is also well known to us that most of the so-called 2-gallon flushing-cisterns do not discharge more than a gallon and a-half. We consider that such a retrograde movement should not be allowed to pass unchallenged, as it is a serious menace to the health of the Metropolis, and we therefore take this means of making known our views on this important point. There are other matters in which sanitary engineers are at variance with the water companies, especially in the district served by the New River Company—such as the provision of automatic flushers for urinals and drains in clubs, banks, etc., where their use is, from a sanitary point of view, of paramount importance. It is therefore quite time that the public should be impressed with the absolute necessity of placing the water supply of the Metropolis in the hands of a body of men who will formulate regulations more in consonance with the advance of sanitary science rather than perpetuate the antiquated powers at present vested in the water companies. It is hardly necessary to say that in making this public statement we are exclusively actuated by a desire to see the health of London advanced."

Messrs. Carter, Tidman, and Hubert have our sincere sympathy, but with a Parliament full of water companies' "friends," and experts like Sir Frederick Bramwell, ready to declare that filthy, stinking, insanitary nuisance, the 2-gallon flush, perfection itself,

we doubt if there is much chance for public welfare having a look in. We are sorry this is the case, as we ourselves are victims of this insanitary outrage.

HOW TO SOLVE THE MARGARINE QUESTION.

MR. JOHN WILLIAMS says:—"The Manchester committee of the Grocers' Association have approved a recommendation making it unlawful to mix margarine with butter in any way whatever. He had read in a certain paper a rather curious argument against this proposal, the writer saying, if it was lawful to mix chicory and coffee, why should it be unlawful to mix margarine and butter? There was a very considerable difference between the two articles. No one thought of drinking chicory alone, and, therefore, the law had allowed it to be mixed with coffee, but still he thought it would have been better if the two articles had been kept and sold separate, leaving the purchaser to mix them himself. But the law did not step in at the proper time. With margarine the case was different. It was a comparatively new thing; it could be made pure and sold pure, and in his opinion there was no necessity for mixing it with butter in any way. The committee of the Manchester Association had also approved, as they would see from the report, the following recommendation of the Select Committee with a view to putting a stop to the fraudulent sale of margarine:—"That it is expedient that margarine for the market should be packed in a prescribed form of box or receptacle, and that while it is exposed for sale it should remain in such receptacle." This, in his opinion, would be a safeguard both for the seller and the purchaser, as then there would be no excuse on the part of the shop-keeper that the margarine ticket had been lost, or that it had just been taken off for the purpose of cleaning down, and so forth, and the purchaser would know from the shape of the package that it was margarine and nothing but margarine." This action is creditable to the Manchester, Salford, and district grocers.

THE SANITARY INSTITUTE.

The council have accepted an invitation from the City Council of Leeds to hold a Sanitary Congress and Health Exhibition in that city in the month of September next.

HOW IT IS DONE!

WE read in a contemporary the following interesting item:—"The Anglo-American Oil Company have contributed £100 towards the building fund of a new Baptist Church at Purfleet, where they have premises. They have, in addition, *allowed services to be conducted in one of their offices.*" This is indeed turning the tools of the devil into instruments of praise, and certainly "charity" covers a multitude of sins, nevertheless it is not every one that saith Lord! Lord! but——. We trust the imitation of their American friends will stop at this. We should not like these prayer-meetings in England to be followed by robbery and arson as is the case with the American ones.

A CURIOUS LINSEED OIL

THE following is copied from the *Revue Internationale des Falsifications*, and shows extraordinary ingenuity in the direction of combination, being the result of an analysis of linseed oil, apparently of excellent quality, but which was offered at a suspiciously low price:—Crude petroleum, 6,000 parts; resin, 125 to 225 parts; zinc sulphate, 50 to 120 parts; beeswax, 115 to 225 parts; lead acetate, 60 to 120 parts; caoutchouc, 15 to 30 parts; linseed oil, 225 to 450 parts.

THE SEPTIC SYSTEM AT EXETER AND YEOVIL.

IN our issue of November 21 last we made some observations respecting the septic system of sewage treatment, which were at the time somewhat severely criticised, especially by our esteemed contemporary, the *Surveyor*.

We, however, felt satisfied that we were right in directing attention to several points in connection with the septic treatment, and our remarks have since then been more than confirmed by specialists in sewage treatment.

We have before us a copy of the report of Dr. Pilkington, the Medical Officer of Health to Preston, who, with a deputation from the Preston Corporation, made an inspection of the septic tank system at Exeter and Yeovil.

We understand the Preston Corporation have been involved in difficulties in respect of their sewage farm, and consequently investigated the septic system with a view to ascertaining whether it would give them satisfactory help.

The sub-committee, we learn from the report, accompanied by the Town Clerk and Surveyor, visited Exeter and Yeovil in December last, when Dr. Pilkington collected samples of crude sewage, septic tank effluent, and filtered effluent, which were sent to Dr. Voelcker, the well-known chemist, for analysis. We need offer but few comments on the following extracts from the report of the Medical Officer of Health, who states that at Exeter and Yeovil he examined and inquired into the septic treatment of sewage as carried on in those two places:—

“EXETER, December 2.

“At the time of my visit rain was falling, as it had been doing the previous afternoon and the greater part of the night. As a consequence the flow of sewage was greatly increased, the amount passing into the septic tank at 11.45 a.m. being 98,000 gallons in the 24 hours, or nearly double the amount of normal dry-weather flow. Within the septic tank, as seen through the inspection windows placed in the walls of the central well, there was floating on the surface of the contained sewage a light scum or pellicle, about 1½ to 3 inches in thickness, whilst at the bottom was a deposit of sludge varying from 6 inches to 10 inches in depth. On removing the plugs from two of the gas vents on the surface of the tank no smell was perceptible, but there was an escape of inflammable gas, probably hydrogen or sulphuretted hydrogen. In the immediate neighbourhood of the sewage, as it passed from the tank over the aerator to the filter bed, there was a distinct sewage smell.

“From the filter in use the effluent which was draining away was fairly clear, and became still more so as the quantity gradually grew less and less, until just before the next mechanical discharge it might be described as quite clear.

“When the discharge took place from the filter, which had been standing full during my visit pending the filling of another filter, the effluent, which ran off with great force, filling the bore of the discharged pipe, was turbid and dark in colour, very little difference being discernible between it and the sewage as it escaped from the tank.

“YEOVIL, December 3.

“The installation here is on a smaller scale than that of Exeter, dealing with the sewage from a population of about 500.

“The septic tank has a capacity of 20,000 gallons and the filters are two in number, and have a depth not exceeding three feet. The nature of the sewage to be dealt with also differs from that of Exeter, inasmuch as it contains refuse from manufacturers (chiefly fellmongers and glovemakers), while that of Exeter is almost entirely of a domestic nature.

“Here, again, in consequence of the recent rains, the

amount of liquid in the sewer was greatly in excess of the normal flow, this being estimated at 15,544 gallons in the twenty-four hours, while at the time I took samples the rate of flow was as much as 42,681 gallons. The effluent from the tank passes direct to one of the two filters, without being aerated, as is the case at Exeter. I took samples here of the sewage before it entered the tank, of the sewage after leaving the tank on its way to the filter, and of the effluent from the filter, immediately after its mechanical discharge.

“These samples, together with those obtained at Exeter, I conveyed to London and delivered to Dr. Voelcker for analysis. He expressed surprise at the turbid appearance of both the ‘purified’ effluents, and judging from superficial observation thought they were in no way comparable with what he had examined from the Freckleton Farm (the Preston Corporation Sewage Farm).

“He acknowledged the principle of the destruction of the solid matters in sewage through the agency of micro-organisms, but doubted if it would work efficiently when dealing with large quantities of sewage, since the very change in volume, and, constant differences in the composition of the sewage, might interfere with or put a stop to the work of these germs.”

Dr. Voelcker's report gives the analyses of the samples, and a report from which we take the following extract:—

“I am given to understand, by Dr. Pilkington, that at the time of his visit to Yeovil the circumstances as regards weather, etc., were of a very unfavourable kind, and there seems to have been some doubt in his mind as to whether the filters were working properly.

“However this may be, it is but for me to report on the actual samples which were entrusted to my care, and regarding these I may say, in short, that with the exception of reducing the amount of the suspended matter, the septic process has accomplished practically no improvement in the raw sewage, and the result is that an effluent which is, chemically speaking, as bad as the liquid portion of the original sewage is sent out.

“To consider this more in detail. Sample No. 2 (of the sewage as it passes from the ‘Septic’ tanks into the filters), had a very much worse smell than even the raw sewage itself; it was lighter in colour and had less deposit, the 36 grains of the raw sewage being reduced to 5.2 grains. There is also less solid residue, 62½ grains against 87½. But in other respects the analysis shows no improvement whatever, for a comparison of Analyses 1 and 2 will make it clear that in No. 2 there is just as much organic matter dissolved (see oxygen absorbed), lime, magnesia, nitric acid, and ammonia. There has been no oxidising effect visible, such as is contended the process promotes, the ammonia remains as before, and not oxidised into nitrates, while the organic matter remains in solution as at first. Practically, therefore, sample No. 2 is little more than No. 1 deprived of its suspended matter, and it is a bad effluent, very inferior to that obtained at your Freckleton Farm.

“Coming next to No. 3, the effluent from the filters, and representing the condition in which the discharge into stream or elsewhere takes place, and without it being necessary to go over the separate items again, it will suffice to say that the same features are prominent. That is to say, a certain amount of the suspended matter has been removed, and very little more done. Ammonia, organic matter, etc., are present in just about the same quantity as before filtering, there is no evidence of oxidising of organic matter or reduction of ammonia taking place, and, but for having rather less matter in suspension, the effluent is little better than the sewage from the septic tank, or even than the crude sewage itself. Moreover, the smell is extremely bad. The retention of as much suspended matter as shown in this sample seems to be proof that

the filters were not working properly, and certainly they appear to me to have done no good.

"To sum up my remarks:—My analyses and examination of the particular samples submitted to me leads to but one conclusion, viz.:—*That the 'septic' process has entirely failed to produce either the purification of raw sewage, or to send out such an effluent as could be properly discharged into a stream.*"

It may perhaps act as a guide to councils if we call attention to the fact that at a recent meeting of the Lichfield Rural District Council, a letter from the Local Government Board was read on the subject of a scheme of sewage disposal for Chase Town, on the septic system. The Local Government Board said that the scheme proposed was not one which they could properly recognise as a fit subject for a loan, and requested that the Council should take the matter into their further consideration, with a view to the adoption of a more satisfactory scheme for the purification of the sewage. Our investigations and Dr. Voelcker's endorse the view of the Local Government Board, and prove that the septic system is unsafe.

We need only add that the "germ theory" is by no means a new idea, as a patent was taken out nearly twenty years ago by a Mr. Walter East, for a septic treatment of sewage in covered tanks, and although elaborate precautions were observed for getting rid of the inflammable and other noxious gases and emanations, nothing came of it but disappointment. The germs of to-day in a cesspool or septic tank are of the same kind as they were twenty years ago, the only difference being that just now we are suffering from a "microbe craze."

Let us be rational and learn to follow the wise teaching of one of the greatest benefactors of the human race, Sir Joseph Lister, now Lord Lister, whose long life has been devoted to successfully fighting against bacilli of all kinds by means of ANTISEPTICS and the vital force of cleanliness as opposed to *putridity*.

PROSECUTION OF A CHEMIST.

INLAND REVENUE BLACKMAIL.

At the Lambeth Police-court, on February 8, Mr. R. Willson, a chemist carrying on business at 52, New Kent-road, was summoned before Mr. Hopkins, at the instance of the Board of Inland Revenue, for having sold by retail a mixture contrary to the Statute.—Mr. Dennis (barrister) appeared for the prosecution, and said the Revenue authorities allowed a certain amount of latitude to chemists as to the manner in which they should be allowed to label their compounds, but in this case they felt that the defendant had gone considerably beyond the mark, and, therefore, they felt bound to bring these proceedings. The label used by the defendant on the bottle produced bore the following words: "Willson's Cough, Fever, and Bronchitis Mixture," and this description, it was contended, brought him within Section 2 of the Act of George III.—Mr. Wm. Spears, a messenger attached to Somerset House, deposed to going to the defendant's shop in December last, and purchasing a bottle of the mixture, which he now produced. He thought it was the defendant who supplied him with the mixture, but could not say for certain.—Defendant: I submit that the evidence of the witness puts an end to the case. It has been held in an action brought by the Pharmaceutical Society that the actual vendor was the person liable.—In the course of some further argument, the defendant contended that this was nothing short of a case of blackmailing on the part of a public body, which did not know its business. They had, he said, offered to forego these proceedings if he would pay them a fine of one pound and say nothing about it, but he declined to have anything to do with their suggestions of a compromise, on the ground that if he had done anything

wrong he would stand by it in a court of justice for the benefit of, and as a warning to, other chemists.—His Worship said the words of the Statute were very wide, and the question he had to consider was as to whether or not the defendant could get outside it. As the things stood at present, it was difficult to see how he could do so.—The defendant said he claimed no proprietary right over the article, nor did he represent it as a curative agent for any particular malady, and, therefore, it could not be suggested that it was a patent medicine within the meaning of the Act. In his opinion, the Board of Revenue was a disgrace as a public body, and was bringing these petty prosecutions against chemists simply for the purpose of wasting the public funds. If he had paid the £1 that was demanded, nothing would have been heard of this case; but he had declined to have anything to do with the Board.—His Worship said the whole question to be considered was as to whether or not the defendant had rendered himself liable under the section of the Act by holding out to the public that his preparation was capable of the cure or relief of disease. Upon the evidence before him he was quite satisfied that the defendant had infringed the Act by the use of the labels complained of, and therefore he should impose a penalty of 40s., together with 2s. costs.—In reply to defendant, Mr. Hopkins said he could appeal.

Our own opinion of the Act of George III. has been often expressed. As George III. was, so it is—a disgrace to any civilised community.

CHICAGO OX TAILS.

At Lambeth Police-court, on Feb. 9, Charles A. Banks, a butcher, carrying on business at Camberwell-road, was summoned, before Mr. Hopkins, at the instance of the Camberwell Vestry, for exposing for sale 18 ox tails, which were unsound and unfit for food. Mr. G. W. Marsden appeared in support of the summons, and Mr. H. I. Sydney represented the defendant.—Charles Henry Kerslake, a sanitary inspector in the service of the Vestry, stated that on the 26th ult. he was passing the defendant's shop when he noticed some ox tails exposed for sale. Seeing that they were in a bad state, he called the assistant's attention to them, and seized them. The defendant came out of the shop at the time, and said the appearances were against the tails, but added that he had had one for his dinner. The tails were marked 4½d. and 6d. each. They were brought to this court on the following morning, and condemned by the magistrate.—Mr. Sydney: Was it the price that attracted your attention?—The Witness: No, it was the smell. Some of them were mildewed. He did not know that these were Chicago tails that came over to this country in a frozen state.—Mr. Sydney said his client purchased a case of 64 ox tails which came from Chicago. They were sold cheaply, and the price probably attracted the attention of the sanitary inspector. He asked his worship not to accept the statement that the tails seized were mildewed, because it was not reasonable to suppose that any tradesman would expose such things outside his shop. It was very cold weather at the time, and the cold wind gave the tails a darkened colour, but that they were eatable was proved by the fact that the defendant and several of his customers had some of the tails on the day on which the inspector called.—The defendant and two of his customers were called for the defence, the defendant saying that he considered the tails were good.—Mr. Hopkins said he always felt a difficulty in this kind of case, because he could not help the feeling that he was placed in the position of witness and judge as well. However, that was the position put upon him by the statute, and he must accept it. Having seen the tails he had no doubt they were bad, but as they were the last of the consignment he was willing to believe it was a mistake. The defendant would be fined £3 and costs.

MARGARINE CASES IN GLASGOW.

SHERIFF LEE sat in Chambers in Glasgow Sheriff Court, on February 2, and tried a large number of cases in which shopkeepers were charged with infringing the law.

YELLOW-LETTERED LABELS ILLEGAL.

William Adams and Co., provision merchants, 45, George-street, were alleged to have exposed margarine for sale without being labelled in accordance with the Margarine Act. They pleaded not guilty.

Inspectors Denovan and Kerr stated that there were only four labels for six packages of margarine.

The respondent and his assistant said that there were six labels. On three of these the letters were in black, and on three they were in yellow. The assistant said that he bought the labels in a printer's shop, and was not told to get them of any particular colour.

The printer, who was examined, said that the yellow-lettered labels were first printed by him in that colour to the order of a grocer, and witness understood that they complied with the Act. He sold a large number of these labels to grocers.

Mr. John Lindsay, Interim Clerk of Police, who prosecuted, maintained that yellow-printed labels were not suitable, being so like the colour of margarine that they were not clearly visible to the purchaser.

The Sheriff said that there was an insufficient number of labels, and the yellow labels were insufficient marking for margarine, especially in a shop lit by gas. Such labels could only be visible to those who had very good sight. As the respondent did not get the labels with intent to deceive, he limited the penalty to 10s., with £1 12s. 10d. expenses.

HE GAVE "BLEND" FOR BUTTER.

Edward Haliday, grocer, 41, Monkland-street, was charged with having, on December 2, sold to Inspectors Denovan and Kerr half a pound of butter which contained 78 per cent. of fatty matter not derived from milk. He denied the charge. It was stated that the butter was sold at 1s. per lb. The salesman said he understood that the inspector asked for half a pound of the 1s. "blend," and that he pointed to it. A fine of 10s. was imposed with £1 12s. 10d. expenses.

A NEGLIGENT SHOPMAN.

James Robertson, salesman in a provision shop at 179, Main-street, Anderston, pleaded guilty of having exposed margarine for sale in his master's shop without it being properly labelled. He stated that he was dressing the window when the inspectors called, and a lump of margarine was lying on a shelf without a label. He was fined £2, including expenses.

MARGARINE IMPROPERLY LABELLED AND WRAPPED.

Black Brothers, grocers, 402, St. Vincent-street, admitted having exposed margarine for sale without the prescribed label and sold it to sanitary inspectors without delivering it in a proper wrapper. Mr. Black said the firm did not push the sale of margarine. A fine of £2 was imposed, inclusive of expenses.

A SHOPMAN'S FAULT.

William Thomson, 648, Gallowgate, was charged with exposing margarine for sale without a label. In tendering a plea of guilty, Mr. Thomson said that he did not attend personally to this shop. His shopman had instructions to comply with the Act. He was a good shopman, and usually very careful. Mr. Lindsay said that the shopman admitted to the inspector that it was his fault. He imposed a fine of 30s. including expenses.

A FALLEN LABEL.

MacBain Brothers, 167, Main-street, Anderston, were charged with a similar offence. It was admitted

by the inspectors that there was a ticket on the margarine, but it had fallen face downward. The fine was £2.

For similar offences, John Russell, 103, West Graham-street, and Robert Jenkins, 28, Elderslie-street, were each fined £2.

ADULTERATION IN BIRMINGHAM.

At Birmingham, on February 5, before Messrs. Ryland and Fisher, George Wells, 390, Nechells-park-road, was summoned for an offence against the Margarine Act. Inspector Carter purchased half-a-pound of butter from defendant's shop on January 20, for which he paid fivepence. On analysis the substance was found to contain 75 per cent. of foreign fat. It was not wrapped up in a paper labelled margarine. Mr. Philip Baker, who defended, said that the offence arose through a mistake on the part of an assistant, who had since been discharged. Defendant had been in the trade sixteen years, and had borne an irreproachable character. A fine of 40s. and costs was imposed. Sydney John Bennett, 85, Irving-street, was summoned for selling milk containing 4 per cent. of added water, and deficient of 18 per cent. of natural fat. Defendant's wife pleaded that she sold the milk in the same condition as she bought it, but the Bench said that had she wished she could have protected herself with a guarantee. A fine of 5s. and costs was imposed.—William Hayward, Icknield-street, was summoned for selling butter containing 75 per cent. of foreign fat, and was fined 40s. and costs.—Edward Dodd, Regent-place, was fined 60s. and costs, for selling adulterated coffee.—Thomas Leake, Nechells-park-road, answered two summonses charging him with exposing unlabelled parcels of margarine for sale on January 20. Defendant admitted the offence. Inspector Jones said that one of the parcels consisted of butter and margarine. The butter was placed on the top of the margarine and the whole parcel marked "Pure butter." Some persons would be served off the butter parcel and other unsuspecting people would receive their supply from the margarine at the bottom. Defendant denied any intention to mislead purchasers. The Bench said it was a very clever device. Defendant would pay 40s. and costs in one case, and in the second, where so much duplicity was revealed, he would be fined £5 and costs.—William Hunt, Hingeston-street, was fined 40s. and costs, for selling butter containing 80 per cent. of foreign fat on January 18.

A BATTERSEA VESTRYMAN.

MR. D. J. GRIFFITHS, a member of the Vestry of St. Mary, Battersea, carrying on business at 17, Battersea-square, appeared at the South Western Police-court last week to answer summonses for selling margarine as butter and coffee adulterated with chicory. A visit was made to the defendant's shop, and butter and coffee purchased. The butter, on analysis, was found to contain 100 per cent. of margarine, and the coffee a similar amount of chicory. Mr. Sheil observed that it was all margarine.—Mr. Young: Yes.—A legal gentleman who represented the defendant argued that there was no intention to defraud.—Mr. Sheil: You cannot tell me that. A man asks for bread and he gets stone; another asks for butter and he gets margarine.—The solicitor: The defendant was ill from heart disease at the time.—Mr. Sheil: Do you say that is a defence for selling adulterated articles?—The defendant said it was quite an accident to place the butter in a piece of paper not marked with the word "Margarine."—Mr. Sheil fined the defendant £10, with £1 17s. 6d. costs.

THE DEMERARA SUGAR QUESTION.

JUDGMENT.

At North London Police-court, on February 4, Mr. Bros was occupied for several hours in continuing the hearing of the summonses taken out by the Islington Vestry against several local tradesmen for selling as "Demerara sugar" an article which was not of the nature, quality, and substance demanded, and, consequently, contrary to the provisions of the Food and Drugs Act. Mr. Bramall prosecuted; Mr. A. J. Ford defended.

Mr. Ford said he had a desire to shorten the case as much as possible. There had been scientific evidence called, the evidence of specialists had been taken, and the Magistrate had had an opportunity of hearing gentlemen in the wholesale trade. So far as the prosecution was concerned, the Magistrate had also heard evidence from the retail trade; and now, for the defence, he intended to call other retail grocers.

Mr. John Williams, 589, Holloway-road, retail grocer, said he had 33 years' experience as a retail grocer. His firm dealt in crystallised sugar, refined in England and abroad. He could not tell whether these sugars were made from cane or beet. The only distinguishing marks were upon the bags and samples. He knew them as "yellow crystals," "Demerara crystals," and his customers knew them as such. The dealer knew them by the mark on the bag, "Trinidad," etc., and the London sugars were known as "Tate's Crystals," "Wilson's No. 1 and No. 2." The public, however, called them yellow crystallised sugars. Nine-tenths of the people asked for Demerara sugar, but they gave preference to that refined in England.

Mr. Ford: If a customer asked for Demerara sugar, would he expect to get it?

Mr. Bros: You cannot ask him that. You may ask what the customer gets, if he asks for Demerara sugar. (Laughter.)

Witness added that the public no more expected to get Demerara sugar than did those who asked for Bath buns expect buns made in Bath. Comparing beet and cane sugars, the former the more easily dissolved, and was 4 per cent. sweeter. Demerara sugar was not the better for containing molasses.

By Mr. Bramall: Witness did not know that the customers were at his mercy when they asked for Demerara, because they got better sugar if they got the yellow crystals, though the latter was what 90 per cent. of his customers asked for. When making out his invoices he only wrote "sugar."

Mr. Abel Frith, 294, New North-road, and elsewhere, said he had been in business as a tea grocer for 33 years. He had bowls of sugar on his counter, and when the customers asked for "Demerara" he asked, "Which will you have?" and they invariably pointed to the bright yellow crystals in contradistinction to the darker-hued Demerara, in which molasses might be felt. The customer was certainly not prejudiced in his purchase when he got yellow crystals in the place of Demerara.

By Mr. Bramall: If, on going to my wholesale man, I asked for Demerara sugar, I should, of course, expect to get it, but I have to cater for the public and consider their tastes. I have had Demeraras returned with a request that it might be changed for the yellow crystals. There is no advantage to the grocer to sell more yellow crystals than Demerara. His only idea is to please his customers.

Mr. Alfred Shrimpton, grocer, Downham-road, said he was one of the defendants in the present case. The sample of sugar now produced was a portion of what he purchased as Demerara, and there was no reason why he should not sell this to the customer if wanted. He did not serve the Inspector's assistant who bought the sample for analysis. He preferred yellow crystals for his own use, and it was frequently the case that the Demerara sugar was brought back to be exchanged for yellow crystals.

Mr. Bramall re-called Mr. Quinton Hogg, and asked as to his assertion about the rule of the thumb test of Demerara sugar and yellow crystals.

Witness said "molasses" and "dirt" were not synonymous terms; though it had been made to appear that the murky condition of the water into which Demerara was put was due to dirt. Molasses was invert sugar, or glucose, and was found in the beet. If they got absolutely pure beet sugar and absolutely pure cane sugar, they would get 99 decimal something per cent., which could not be improved upon. The molasses from the cane sugar was good and sweet, as everybody knew; but the molasses from the beet was rather an objectionable article, and went chiefly to France, and subsequently was imported in cheap French brandy. With regard to the superiority of Demerara over beet sugar, he said he made a special line of white cane sugar every year to the wine growers of the Rhine, and they paid him £2 a ton more for it than they would pay for beet sugar. He was told that the latter was not so suitable.

By Mr. Ford: I would not say that Messrs. Lyle or Messrs. Tate do not also supply wine growers.

By the Magistrate: Witness adhered to his statement that Demerara sugar was the best sweetener.

Mr. Bros gave a lengthy judgment. He expressed the opinion that the article in question had been sold to the prejudice of the purchaser, and also that it was not of the nature, substance, and quality demanded. There had been contentions that an article sold to an Inspector was not to his prejudice, because he did not purchase it for his own consumption. But he was prejudiced because he did not get the article he desired to have analysed. It was not a question for him (the Magistrate) as to whether cane sugar was better than beet sugar. He only had to consider whether it was of the nature, quality, and substance demanded. It had been indisputably stated that there was a difference between the beet and cane sugars, and that there were different elements in each. Therefore, he must decide in favour of the Vestry on all points—for selling an article to the prejudice of the purchaser, and which was not of the nature, quality, and substance demanded.

"KURRUWA"

This word is registered, and used as a Trade Mark for Best Quality Articles only, and has now become synonymous with quality for the following specialities:—

TEA (Pure Blends).

A—1s. 6d. lb.; B—2s. 1b.; C—2s. 6d. lb.; D—3s. 1b.; E—4s. 1b.

PURE CHINA. HT (1) 2s. 1b. HT (2) 2s. 6d. 1b

Packed in ½lb Bags, 1lb., 1½lb., 3lb. and 5lb. Tins; in Boxes 10lbs. and 20lbs.; Half Chests 50lbs. and Chests 100lbs.

DELICIOUS SOLUBLE COCOA.

Prepared and manufactured in England on the popular Dutch principle.

Packets—6d. Tins—½lb. 8d., 1lb. 1s. 4d., 1½lb. 2s. 8d.

FINEST CHOCOLATE ALMONDS, ½lb. boxes 6d. and 1½lb. boxes 1s.

See that all Articles are marked "Kurruwa," and if there is no Agent near please write direct to:—

THE "KURRUWA" ASSOCIATION, 2 and 3, IDOL LANE, LONDON, E.C.

It was not a case for a heavy penalty, though the question of the sugars had been well fought out. But he must consider as to the costs.

Mr. Ford said his client was a poor man.

Mr. Bramall: With a very good backing up. (Laughter.)

Mr. Ford: And the costs of the prosecution will be borne by the ratepayers.

Mr. Bros: I shall fine this defendant 10s. 6d., and 8 guineas costs, and give him fourteen days in which to pay. The other defendants can come up another day to be dealt with.

At North London, on February 11, the remaining defendants in the sugar case came before Mr. Bros for adjudication upon their summonses. Last week Mr. Bros found that the Demerara sugar purchased for analysis by an officer of the Islington Vestry was not of the "nature, substance, and quality demanded, and was sold to the prejudice of the purchaser," and he fined the defendant then before him (Mr. Shrimpton, of Downham-road), whose case was taken as a test case, 10s. and £8 8s. costs. The defendants now before the Court included: William Williams, of Culford-road; William Marsh, of Baxter-road; Nellie May, of Mildmay-street; Daniel Richards, of Ball's Pond-road; Frederick William Goodchild, of Rotherfield-street; John Johnson, of Sherborne-street; Mary Ann Morgan, of Norfolk-road; William Gold, of Newington Green-road; Geo. Tullock, of Elmore-street; and James Bowles, of Shepperton-road.—Mr. Bramall again represented the Islington Vestry.—Mr. Williams gave proof that he bought the sugar from which the sample was taken as Demerara sugar, and Mr. Bros ordered him to pay 12s. 6d. costs, and told him he might recover it from the person who sold him the sugar.—As Mrs. May was not in good circumstances, Mr. Bramall withdrew the summons against her.—Daniel Richards, who denied having been asked for Demerara sugar, said the young lady asked for brown sugar, and he sold it as such. He was fined 21s. and 2s. costs.—Mr. Goodchild said he sold the sugar as he bought it—viz., as Demerara, and was let off on payment of 12s. 6d. costs.—Mr. Johnson pleaded guilty, and said he did not know the difference in the sugar, and he was fined 10s. 6d. and 2s. costs.—Mrs. Morgan showed an invoice for a parcel of Demerara sugar, and was fined 10s. 6d. and 2s. costs.—Mr. Gold pleaded guilty, and said he bought the sugar as yellow crystals, and did not think he was doing harm in selling it as Demerara. He was fined 10s. 6d. and 2s. costs.—George Tullock and James Bowles, who also expressed previous ignorance as to the qualities of the sugar, were fined 10s. 6d. and 2s. costs each.—Mr. Marsh also was fined 10s. 6d. and 2s. costs.—Mr. Bros cautioned each of the defendants as to seeing that they got what they ordered from the wholesale men, and as to selling to their customers that which they were asked for.—Mr. Bramall pointed out that on the invoices produced for Demerara sugar the prices were higher than for the yellow crystals, which had been held to be dyed imitations.

PRECIPITATE OF SULPHUR—APPEAL DISMISSED.

In the Queen's Bench Division, on February 1, before Mr. Justice Wright and Mr. Justice Bruce, the case of *Sandys v. Simpson* came on for hearing.—Mr. Hextall, for the appellant, said this was an appeal by way of a case stated by the Justices of Heanor, Derbyshire, against the dismissal of an information by a majority of three justices out of four. The appellant is the inspector under the Weights and Measures Act charged with the execution of the Sale of Food and Drugs Acts. Joseph Hewitt, a county inspector, was at Heanor on August 18, 1896, and, acting under the appellant's instructions, he went into the respondent's shop, the respondent being a chemist and druggist.

He was behind the counter, and Hewitt asked for half-a-pound of precipitate of sulphur. The article was weighed up and put into a parcel, while a label was affixed. The parcel was then handed to Hewitt, who paid 6d., and intimated that the contents of the parcel would be submitted to the public analyst. On the analysis, the compound was found to contain 46 per cent. of sulphate of lime. The appellant's case on the information, was that the sulphur was not of the substance, nature, and quality demanded by Hewitt, who denied, in cross-examination, that respondent informed him that he was selling milk of sulphur, and offered to change it to precipitate. The respondent, in the course of the hearing of the summons, stated, but not on oath, milk of sulphur was what his customers expected to be supplied with, though he kept the precipitate for medicinal purposes. The respondent added that he rather sealed his own doom by affixing a precipitate of sulphur label. This he accounted for by the fact that he had run out of milk of sulphur labels, and he further stated that he was not well on the particular day Hewitt called. The justices dismissed the summons by the majority mentioned on the ground that the respondent was well-known, and was a most respectable and honest tradesman. They fully believed his statement, notwithstanding the evidence of Hewitt, whom they were satisfied knew perfectly well before delivery that the article was milk of sulphur and not precipitate. Counsel now submitted in support of the appeal that the magistrates were bound to act upon the evidence before them, and in this case they wilfully disregarded that evidence.

Mr. Justice Wright said he should think that very likely the magistrates were wrong in this case, but they had a right to go wrong if they could reconcile it with their consciences.—Mr. Justice Bruce agreed.—The appeal was then dismissed with costs.

MEAT.

A NEWCASTLE COWKEEPER FINED £20.

BEFORE Sir Charles Hamond and other magistrates at Newcastle, on February 5, Robert Smith, junr., cowkeeper, of Spital Tongues, was charged with exposing four quarters of beef which were unfit for human food.—Mr. Holmes said on the last day of the preceding year the defendant had a cow which had been taken ill and had been dosed with medicine. As it got no better the next day, he put the animal into a cart and took it down to the Cattle Market, where he employed a man named Atkinson to slaughter the beast. He told the man that as he would be busy the succeeding day, he had to deposit the meat at Tindall's Meat Mart. The meat was duly left at Tindall's, but had attracted the attention of Inspectors Dodd and Hedley, who found that it was unfit for human food. The defendant turned up at the market during the course of the day, and when questioned about the meat, said the butcher had sent it to the mart without his authority.—The evidence of Inspectors Dodd and Hedley and Dr. Armstrong was to the effect that the lungs of the animal were congested and stank, and that the beef was affected by the medicine.—Atkinson, the slaughterer, said the beast was unable to stand when taken to the Cattle Market. It was dragged into the slaughter-house and killed lying down. In preparing the carcase for the market he told the defendant that it had a nasty smell, but he answered that that was due to the animal having taken medicine.—Defendant said that he merely sent the animal down to the Cattle Market in order that it might be inspected. His instructions to Atkinson were that the beef had to be inspected, and he called two drovers who were in the slaughter-house at the time to bear this statement out.—The Bench, after giving full consideration to the case, fined the defendant £20 and costs.

STEAK AT FOURPENCE A POUND.**A NOTTINGHAM BUTCHER SENT TO PRISON.**

AT the Nottingham Summons Court, before Mr. T. Hill and Mr. F. Acton, Oliver Wheatcroft, of 24, Narrow-marsh, was summoned for depositing for sale, or for the preparation for sale, ten pieces of meat that were unfit for the food of man. Mr. F. B. Harris (from the Town Clerk's office) prosecuted, and Mr. H. B. Clayton defended.—Mr. H. T. Moore, inspector of nuisances for the borough, said that on the 9th ult. he went in company of two police officers to the defendant's shop. In a scullery behind the shop he found ten pieces of beef, being parts of two hind quarters, and one fore-quarter. He had the whole weighed, and it amounted to 176 pounds. It was very soft and flabby, and of a bad colour, and was extremely emaciated from some wasting disease. There was evidence of pleurisy having existed in the chest, although the lining membrane had been partially removed. The general condition was consistent with the animal having been killed in consequence of dysentery. The defendant told him that he had had it brought to him that morning from the country. He pressed him with a view to obtaining from him from whom he got the meat, but he would not say. He added, however, that he had sold some of the steak for 4d. per pound. He said he was a fool for having anything to do with it. Witness asked him if he would have the meat examined by a veterinary surgeon or anyone else on his own behalf. He answered, "No; take it away, and deal as lightly as possibly with me."—By Mr. Clayton: He did not say that he was going to send the meat back that morning.—Dr. Boobyer, medical officer of health for the borough, said he saw the meat in question at the Eastcroft. It was wet; extremely poor, and of a bad colour. There was evidence on one side of the chest having been peeled; and it would not have been peeled for nothing.—Mr. W. Taylor, veterinary surgeon, gave corroborative evidence.—Mr. Clayton called for the defence the daughter of the defendant, who said that her father was out when the meat was brought to the shop. When the defendant came home he said that the meat was of no use to him, and he should send it back.—Mr. Hill said that it was a very bad case, and as the defendant had been convicted three times, he would have to go to prison for three months.

MILK.

AT Reading, on February 5, John Embury, dairyman, 14, Christ Church-road, pleaded not guilty to a charge of selling adulterated milk.—Mr. Millington (Deputy Town Clerk) prosecuted, and Mr. W. J. Brain defended.—William Henry Robertson, Inspector of Nuisances, said that he met the defendant's milk cart in Queen's-road, the defendant being in charge of it. Witness asked for a pennyworth of milk, which came to half-a-pint, and which the defendant gave him. Witness divided the milk into three portions, and signed, sealed, and labelled each portion of the samples. As the horse was restive, witness labelled and sealed the milk in an adjoining tavern. He sent one sample to the Public Analyst, gave one to the defendant, and kept one himself. On January 25 he received a letter from the Public Analyst stating that the milk was not up to the proper standard.—Cross-examined: There was about a quart of milk left in the can after witness had had his purchase taken out. The vessel which contained the milk was a can which was used to take milk to the houses; it was not a churn. Witness said he wished the defendant had some more milk, and told the defendant that he was sorry he had not got a sample from a larger vessel. The defendant told him that the milk was not his own dairy milk.—Dr. Ashby, Public Analyst to the Borough of Reading, said the percentage of added water was judged by the quantity of solids not

fatty. Normally, milk contained not less than 8½ per cent., but in this case the non-fatty solids were only 7·31 per cent.—Cross-examined: The quantity of fat in milk might be affected by the length of time it had been on sale, but this would not affect the non-fatty solids, as they would not rise like the fat.—Mr. Brain said that during the long period the defendant and his father had carried on their business there had been no complaints as to the quality of their milk. They kept their own cows, but, unfortunately, on the day in question Mr. Embury ran short of milk, and had found it necessary to purchase additional milk from various persons.—Mr. Millington: Would you like to put your client in the box; then he can say who these persons were?—Mr. Brain, continuing, said the defendant, unfortunately, did not obtain a written warranty as to the quality of the milk.—The Chairman said the Bench would be obliged to convict. The defendant would be fined £2, with 19s. 6d. costs.

THE EXTENT OF SURREPTITIOUS DRUGGING OF FOOD.

AN interesting investigation has been made by Dr. Alfred Hill, M.O.H., of Birmingham. Instructed by the Health Committee, Dr. Hill writes:—

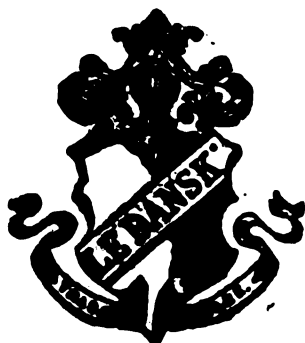
"A number of samples of various foods were bought in November, and examined for the presence of preservatives. On the 12th I received six samples of bacon, and found that four of them contained boric acid. On the 13th I examined four samples of thick cream; one was genuine, one contained salicylic and boric acids, and two contained boric acid only. Two samples of clotted cream both contained boric acid. On the 16th of the same month boric acid was found in three samples of 'ham and tongue,' in two samples of German sausage, and in one sample each of 'chicken, ham, and tongue,' Sheffield polony, and pickled tongue. Two out of four samples of sausage, and one out of two pork pies, also contained this preservative. The single sample of pickled beef was free from it. On the 27th I received six jams, and found salicylic acid in five of them."

How much longer will this amateur surreptitious drugging be tolerated?

POISONOUS MINERAL WATERS.

THE Massachusetts State Board of Health has recently conducted an investigation to determine if there was danger in using metallic stoppers for such beverages as lemon soda. Some new facts have since come to light. During the summer, such bottled goods are offered for sale at fruit stands and some drug stores; and a particular bottle often may be kept for some time before being sold. The chief case brought to the attention of the authorities was that of a man who made a practice of drinking lemonade from these bottles throughout the summer, and who was eventually made ill. As his symptoms were those of poisoning, a sample of the bottled lemonade was procured, analysed, and found to contain traces of lead. The stopper found in the bottle was found to be largely composed of lead. This discovery led to other tests of similarly bottled waters and syrups, with the result that about 30 samples recently reported the Board found four of which the stoppers contained about 50 per cent. of lead, while the amount in the stoppers of the other specimens ranged from 35 per cent. down to 3 per cent. The contents of all these bottles were found to contain traces of lead, the largest amount of poison being equivalent to 0·27 of a grain per gallon. Dr. Abbott, Secretary of the Board, describes lead as "a cumulative poison," and says that while a few parts of a grain, taken into the system every day, might not show any evil effect, continual additions would result at length in a sudden exhibition of all the symptoms of poisoning.

To the Grocers, Provision Merchants, Pastry-Cooks, Confectioners, and
the Public of the United Kingdom.



"LE DANSK"

MARGARINE.

A Perfect, Pure, and Wholesome Butter Substitute, for Table use
and every description of Pastry. In Colour, Flavour, and Texture,
equal to Best Brands of Butter, costing one-third less. This unique product stands far above
other makes, and has received honour everywhere. Has the largest sale in the world!

"THE LANCET" (the leading Medical authority of the world) says:—

"It is of pure and excellent quality."

Monsieur ARNAUD (Chef to his Grace the Duke of Westminster) says:—

"I hereby certify that **"LE DANSK"** is equal to butter for pastry making in the way
of taste and lightness, and superior to same in giving it a rich colour. I can testify to the above, having
made full experiment.

(Signed) S. ARNAUD."

AGENTS FOR THE SALE OF "LE DANSK" IN SEALED BOXES

H. Alexander, 66, Mount Grove-road, Highbury.
Ambrose & Son, General Supply Stores, Loughton, E.
Bayly's Stores, 16, Seymour-st., Euston-sq., N.W.
James Bartlett, 82, Chalk Farm-road, N.W.
John Collier & Co., 120 and 122, Bow-road, East.
W. J. Cartwright, The Stores, and 6, Chichele-
parade, Cricklewood, N.W.; also at 6, Station-
parade, Willesden, N.W.
Crisp & Co., 67-83, Seven Sisters'-road, N.
W. H. Curry, 40, High-street, South Norwood.
W. H. Cullen, 2, Pond's-buildings, High-road,
Lower Clapton.
W. H. Dent, 297, Kennington-cross, S.E.
Dowling & Son, 20 & 30, King-st., Tower Hill, E.C.
The Crystal Palace Supply Stores, 80, Westow-hill,
Upper Norwood. Edmonds & Co., proprietors.
Rowland Ellis, 119, High-street, West Norwood.
J. Everett & Co., Everett's Stores, St. James's-
street, Walthamstow, E.
T. G. Edwards (successor to Thomas Gibbs), 54,
Upper Baker-street, W.
Edwards & Son, 68, Marchmont-street, W.C.
J. Frear & Son, 1 & 2, Algernon-terrace, Hendon,
N.W., Victoria-road, Hendon, N.W., and Burnt
Oak, near Edgware.
W. & G. Forth (late H. Ward & Co.) 272, High-
road, Chiswick, W.
James Grogan & Co., 173, Blackstock-road, N.,
and 1, Broadway, Highbury.
D. A. Guy, 4, Formosa-st., Warrington-crescent, W.
T. W. Hawes, 11 & 13, High-st., Camden Town.
Harrod's Stores, Limited, Brompton-road, S.W.
F. Holland, 10, Grove-terrace, Holland-park, W.
H. Hetherington, High-street, Woodford.

Jones Brothers, 348 to 366, Holloway-road, N.
R. Jones, 32 and 33, Chiswick-street, Poplar, E.
C. Kibbie & Co., 49-57, Broadway, Deptford, S.E.
F. H. Kerry, 20, Bellevue-rd., Wandsworth Com-
mon, S.W.
John Kettle, 58, Woodgrange-road, Forest Gate.
The Kensington Stores, 64 to 74, Hammersmith-
road, W.
Leverett & Frye, Ltd., 1 & 2, Strathavon-terrace,
Hendon, N.W.
Leverett & Frye, Ltd., 31, High-st., Islington, N.
Leverett & Frye, Ltd., Competitive Stores, 111,
High-road, Streatham, S.W.
Leverett & Frye, Ltd., Finchley-road, N. Finchley.
Leverett & Frye, Ltd., 86, High-street, Notting
Hill, W.
Leverett & Frye, Ltd., 35, Upper George-street,
Edgware-road, W.
Leverett & Frye, Ltd., 6, Castle-ter., Belvedere
Kent.
Leverett & Frye, Ltd., 88, Peckham-road, Peckham,
S.E.
Leverett & Frye, Ltd., 281, Barking-rd., Barking, E.
Leverett & Frye, Ltd., 188, Bow-road, Bow, E.
Leverett & Frye, Ltd., The Pavement, Wanstead, E.
T. Lighton, 98, Brixton-hill, S.W.
H. Mose, Whitehall Parade Stores, 11-19, Arch-
way-road, N.
J. Mercer, 24, Lordship-lane, East Dulwich.
Nichols & Fisher, 286, Elgin-avenue, Maida-vale,
and 173, Ladbroke-grove, W.
G. S. E. Newcombe, 78, Westow-street, Upper
Norwood.

George Olsen, Chingford.
Thomas Pelling, Broadway, Barking, E.
G. H. Page, 43, Castle-street, Oxford-street, W.
Parker's Stores, 112, Norwood-rd., Tulse-hill, S.W.
Jno. Phillips, 12, Circus-rd., St. John's Wood, N.W.
A. Rake, Craven-passage, Strand, W.C.
J. W. Robey, 204, Bow-road, E.
Sargeant & Co., Park Hall Stores, High-road, E.
Finchley
Sherwin & Wallis, 136, Seven Sisters'-road.
J. Sitton, 37, London-road, Southwark.
Charles Savage, 216, 218, 220, and 414, Kennington
Park-road, S.E.
A. C. Smith, 134, Petherton-road, Highbury.
The Supply Co., 15-17, Dartmouth-rd., Forest Hill.
Joshua Thomas, 56 & 58, Lamb's Conduit-street,
Holborn.
Tower Hamlets Co-operative Society, Ltd., 436
and 438, Commercial-road, E., 20, Brunswick-rd.,
Poplar, E., 227-229, Bow-road, E.
H. Turtle, 244, Mile End-road, E.
P. Thorn, 22 & 24, Greyhound-rd., Hammersmith,
W.
Wakefield & Sons, 140, High-road, Streatham,
Gloucester-road, Streatham.
Wahnrow's Stores, 38, Store-street, Tottenham
Court-road.
W. Whiteley, Queen's-road, Westbourne-grove
Williamson and Sons, 63-67, High-st., St. John's
Wood, N.W.
H. W. Wood, Temple Stores, Commercial-road,
Stepney, E.
A. Waters, 29, Paddington-street, W.

BOVRIL



What it is!

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Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

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Food and Sanitation.

SATURDAY, MARCH 6TH, 1897.

THE PETROLEUM COMMITTEE.

ON the motion of Sir W. Walrond, the following members have been appointed a Select Committee to inquire into and report upon the sufficiency of the law relating to the keeping, selling, using, and conveying of petroleum and other inflammable liquids, and the precautions to be adopted for the prevention of accidents with petroleum lamps: Sir T. Carmichael, Mr. J. Collings, Mr. A. Cross, Mr. F. Flannery, Sir E. Hill, Mr. Wootton Isaacson, Mr. Kenyon, Mr. M'Killop, Mr. Mundella, Mr. Pollock, Mr. H. Reckitt, Mr. C. Rickett, Sir B. Stone, Mr. Tully, and Mr. Ure.

We commend the following object-lesson to these gentlemen's careful attention:—

At Liverpool, on February 25, Captain R. H. M'Neil,

master of the steamship *Helen*, was summoned for allowing an oil lamp to be used upon his vessel whilst in the Toxteth Dock, burning oil which gave off an inflammable vapour at a temperature of less than 120 degrees Fahrenheit, contrary to the provisions of the Petroleum Act, 1879. The evidence was to the effect that the steamer was discharging cotton at the dock in question, when the lamp got broken, and the oil was spilt over some cotton, igniting it. The fire was put out without much difficulty. The oil used was common petroleum. Mr. Tongue, who prosecuted on behalf of the Dock Board, referred to the danger of using paraffin of a low flashing point, and asked for a penalty to be inflicted which would be a warning to other offenders. The magistrates inflicted a fine of £5 and costs, the Chairman remarking that it appeared that the cheap oil had been used from motives of economy, and, if that was so, the practice must be stopped.

Yet we have Sir Frederick Abel and other "experts" asking the Committee to believe that 73 degrees is a safe flash point, because it will allow of the American oil gang shipping to this country their 40 per cent. of murderous refuse oils which no State in America (despite all the talk about corruption and bribery in the United States) will allow to be sold in America.

HOW DAIRY COMPANIES ARE INJURED.

AT Watford Petty Sessions, on February 23, William Edward Silverwood, Watford, was charged with selling to Mr. Rushworth one pint of new milk, which was not of the nature, substance, and quality demanded, but was adulterated with 10 per cent. of added water, at Watford, on February 7.

Mr. Rushworth said that at the time of the occurrence the defendant was in the employ of a large dairy company. Defendant on the Sunday morning in question was seen to go to a water tub, take some water out, deliberately empty it into the milk, and then proceed on his round selling it. The person who saw the defendant do this gave him information, and he went in search of him and took a sample in the usual way, with the result that the milk was found to contain 14 per cent. of water. He took the opportunity of going to the defendant's employers and brought a sample of the milk away with him. This was found to be pure. He asked the Bench to deal severely with the case, because the defendant had not only committed robbery against the company who employed him, but he had also adulterated the milk with bad water, which was detrimental to the health of young children.

Joseph Wilson, labourer, of 45, Fearnley-street, stated that on February 7 he saw the defendant go to a dirty rain-water tub on private premises at the back of Merton-road. He put the can of milk on the window-cill for the occupier of the house, and then took two cans and dipped them into the rain-water tub. He then walked out and put the cans in the passage, after which he pushed his churn into the passage and emptied the water into it. He afterwards saw defendant supply milk from that churn to his customers. Knowing that the water he had taken was not fit for use, he went and informed Mr. Rushworth of what he had seen.

By the Chairman: I went and looked at the water in the tub, and found it was filthy.

Wilfred Brown, assistant to Mr. Rushworth, stated that in accordance with instructions received, he went to the defendant in Butcher's-yard, and asked for a pint of new milk. The defendant supplied him from his can. He handed the milk over to Mr. Rushworth.

Mr. Rushworth, Inspector under the Food and Drugs Act, said when he received the milk from the last witness he told the defendant that he had purchased it for analysis, and divided it into three portions in the usual way, sending one portion to A. C. Ekins, St. Albans, the public analyst, keeping one, and returning

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the remaining portion to the defendant. After this he went to the manager of the company, in whose employ defendant was at the time, and informed him of what had occurred. The manager showed him some of the milk from which the defendant had been served. He took a sample, and the subsequent analysis showed that the latter was pure, and that taken from defendant's can had 14 per cent. of water.

Mr. Henry Davies, branch manager of the Farmers' and Cleveland Dairy, Vicarage-road, Watford, said on February 7, he sent defendant off with new milk. He was the last man out that morning. When Mr. Rushworth called, witness pointed out to him the drum from which the defendant had taken his milk. He at once took the defendant off his round, having 14 gallons and three pints, so that he had nearly as much milk when he finished his round as when he started. (Laughter.) He put the remainder of the milk down the sink. The incident had done the company a lot of damage.

By the defendant: I have had no complaints about the quality of the milk. I have complained of you bringing too much milk back.

Re-examined: I found some water in one of the cans on the defendant's truck after he came in.

By the defendant: I never said it was "all right," when you returned; I said there was fifteen per cent. of added water directly I saw it. I discharged defendant at once.

Defendant said that the only evidence against him was that of the man Wilson, which was of a doubtful character. He admitted taking water from the tub, but he had always done so, and never made a secret of it. It was for washing out the cans that he took the water.

The Chairman said that it was proved conclusively that the defendant had taken water and added it to the milk. Defendant had not only done that, but might have seriously damaged the reputation of his employers, had they not been able to prove that they served pure milk to the defendant. It was a very good thing the company did serve pure milk, and it was to be hoped all other companies took the same care. He would be fined £5, and £1 15s. 6d. costs.

Defendant asked for time to be allowed for payment. He had been out of employment for a fortnight through the affair.

The Bench refused to allow time, the Chairman saying that the offence which the defendant had been guilty of was a very serious one.

Defendant was removed in custody, but the money was afterwards paid.

CAMBERWELL AND ADULTERATION.

At the last meeting of this Vestry, Mr. Somerville drew attention and took objection to the form of Dr.

Teed's quarterly report, objecting in particular to the phrase, "The dawn of a new era, in which the milkman shall cease to water," as being unsuited to a scientific report. Speculative observations as to the ethics of Somerset House were also criticised as beyond the scope of an official document, while, added Mr. Somerville, it was a misuse of terms to apply the word "fraud" to the use of certain dyes in the colouring of Demerara sugar, seeing that the fact was that only certain yellow crystals were added to suit the taste of the London public. He also thought it was stupid to suggest that this kind of adulteration, so-called, was owing to the existence of foreign bounties.

Dr. Teed, in reply, confessed that he saw no objection in the phrase he had made use of with respect to milk, and as to the term "fraud," it was identical with the expression of opinion by the magistrate.

After which preliminary skirmish the following very instructive debate took place:—

The Vestry was made special to consider a notice of motion by Mr. Gregory, recommending that the following motion on the books of the Vestry be rescinded—viz., "That the Vestry publish the names, addresses, offences, and convictions of persons under the Food and Drugs Act (and food unfit for consumption) on the Vestry notice boards, the depôts, and on the other public buildings, etc., belonging to the parish after second offence." The mover said this resolution savoured too much of persecution to be just. It was not the duty of the Vestry to interfere with the decisions of magistrates. If they were of opinion that the law was not strong enough, it was their duty to agitate for its amendment. When a penalty was imposed, the Vestry should not go out of its way to re-try the case. (Hear, hear.)

Mr. Somerville seconded the motion.

Mr. Dobson, who pointed to the diminution of cases as a result of the resolution, contended that it was the duty of the Vestry to administer the law exactly as the law stood at the present time. The man who adulterated his milk with water was a thief and a murderer, and ought to have his ears nailed to the panels of his door-post, as would have been the case in the time of our forefathers. ("Oh!")

Mr. Preston, while giving Mr. Dobson credit for disinterested motives in so far as questions affecting labour were concerned, reminded that gentleman that constitutional Liberals of the past—very different men to those who claimed to be Liberals to-day—were the means of doing not a little for the labouring classes.

The Chairman: Mr. Dobson is not suggesting you are not a Liberal. (Laughter.)

Mr. Preston, in continuation, did not think the reduction of adulteration was due to the publication of the cases so much as the realisation by the magistrate that the Vestry was earnestly desirous of putting down adulteration.

Mr. O'Connell remarked that the last speaker, while sympathising with the workers, voted for the workers' food being poisoned, and to shield criminals who poisoned young children. (Dissent from the Moderates.) If some of the gentlemen on the Moderate benches lived in the poor district where he lived, they would readily sever every party tie and vote for the cause of righteousness and justice. He was surprised that a gentleman calling himself a Progressist should make such a proposition as this, and he felt certain that on the first opportunity the voters in his ward would repudiate him.

Mr. Rumney Smith repudiated the suggestion that the Moderates had any sympathy with traders who adulterated their goods.

Mr. Moss could not find that Mr. Gregory had adduced any new arguments to justify his resolution. The ratepayers should know—they had a right to know—the names of the tradesmen who offended, in order that they might make their purchases of people whom

they could trust. Mr. Preston—a man of large sympathies—professed to sympathise with the working classes. Sympathy was a poor thing, after all; what the workers wanted was justice. (Hear, hear.)

Mr. Austin had no objection to seeing a man punished for his offences, but he reminded the Vestry that milk was tampered with in transit, and that the tradesman was often unjustly accused of adulteration.

Mr. Coward pointed to the reduction of the percentage of adulteration from 46·8 to 16·8 as a substantial fact that seemed to be due to the action of the Vestry.

Mr. Towler argued that it was unfair, un-English, and unjust—

A Voice: To adulterate.

Mr. Towler: No; to put men in the pillory and take the law in their own hands in a manner that could not be justified. He would no more put the adulterators in the pillory than he would the adulterers. (Laughter.)

Mr. Hampden-Davis observed that the Moderates said "Trust the law," when they knew very well that if he had the money to bribe lawyers, he could do anything he liked with the law. ("Oh," and laughter.)

The Chairman: Mr. Davis is not speaking of the law generally, but of his own experience. (Laughter.)

Mr. Davis, resuming, said he came to that Vestry that night suffering from the effects of bad meat, and he should like to punch the man who sold it. (Loud laughter, and "Name.") No, he declined to give "names." It was the duty of the Vestry to prosecute, but he should keep his eye on the shop. (Laughter.)

The closure having been agreed to,

Mr. Gregory, in reply, proceeded to traverse the arguments against the motion. The Vestry had no more right to persecute tradesmen than they had to persecute himself. Supposing—and not being a teetotaler, like Mr. Teasdale, he was presumably liable to the weakness—he took a glass too much, and, after making the usual excuses as to meeting a friend over night, he was fined half-a-crown or three days. (Laughter.) In such circumstances their friend Mr. Dobson would vote for circularising the whole of the vestries of London that he had been fined for being drunk. (Renewed laughter and some noise.) He wished the gentlemen would keep order.

Mr. Woodmansee (rising): I never said a word.

Mr. Gregory: And I never said you were a gentleman. (Laughter.)

Mr. Woodmansee: I am surprised we have such gentlemen as you here. (Laughter.)

The division was taken upon strict party lines, the Moderates voting for the motion and the Progressists against. The result was—For the resolution, 42; against, 30; did not vote, 2. The two-thirds majority necessary to rescind not having voted, the chairman declared the resolution "not carried," an announcement that was hailed with Progressive cheers.

Mr. Foster: Bravo; (To the Moderates): Go to your masters!

ADULTERATION IN CHESTER.

THE report of the Public Analyst appointed for the County of Chester, Mr. J. Carter Bell, upon the articles analysed by him under the Sale of Food and Drugs Act, during the quarter ending December 31, 1896, states that:—

During the quarter ending December 31, 1896, I have analysed 242 samples, consisting of 86 butters, 74 milks, 12 spirits, 11 coffees, 7 ginger, 6 peppers, 3 arrowroots, 3 yeast, 2 oatmeal, 1 castor oil, 1 tincture of rhubarb, 1 ipecacuanha wine, 5 cheese, 1 Hugon's Beef Suet, and 29 waters. Of these 8 were adulterated, namely, 4 milks, 2 butters, and 2 spirits. One milk was adulterated with 5 per cent. of water, and the remaining three were deficient in cream to the extent of 10, 14, and 33 per cent. respectively; these were evidently cases in which separated milk had been added

to whole milk. The butters contained 88 and 92 per cent. of foreign fat. The spirits contained from 4 to 7 per cent. of water in excess of that which is allowed by the Act. Owing to the admirable and systematic manner in which the samples are collected in Cheshire, adulteration has fallen to a minimum. The average per centage of adulterated samples for the year 1896 was as low as 2·5. This is the very lowest per centage I have had to record, and according to a recent Government report, it is stated that "the proportion of adulterated samples for the whole of England for the year 1895 was 9·3 per cent., which is 1 per cent. lower than in 1894, and the lowest percentage of adulteration since the passing of the Sale of Food and Drugs Act. This exceedingly low average of 2·5 for Cheshire is in marked contrast to a neighbouring borough to which I have the honour of being analyst; the samples which are taken are few and far between, and the result is that the adulteration exceeds 50 per cent. The milk supply of Cheshire is excellent; only 5 per cent. of the samples were adulterated, against 11 per cent. for the whole of England, and, in my opinion, three out of the four samples were adulterated with separated milk. This form of adulteration is not so very easy to detect, for when a milk is found deficient in cream, the excuse is put forward that it was the 'last in the can,' or, in other words, that the early customers got the cream. Magistrates are inclined to believe this absurd statement, and, to prove the fallacy of the above, I asked an inspector to travel with the cart, and to take a sample on starting, another in the middle of the journey, and a third at the end. The following are the analyses of the three samples:—

| | 5.30 p.m. | 7 p.m. | 8.30 p.m. last in can. |
|--------------------|-----------|--------|---------------------------|
| Total Solids ... | 12·49 | 12·56 | 12·57 |
| Solids not Fat ... | 8·94 | 9·02 | 8·98 |
| Fat ... | 3·55 | 3·54 | 3·59 |
| Ash ... | ·73 | ·73 | ·70 |

It will be seen that, practically speaking, there is no difference between first and last. It is difficult to account for the small abstraction of cream in many cases, and it can only be explained by this addition of separated milk.

There has been a very great improvement in the butter samples. In the corresponding quarter of last year the per centage of adulterated samples was 14; this quarter the per centage is slightly over two.

No samples have been analysed under the Fertilisers and Feeding Stuffs Act. This may be due to the fact that the farmers are becoming more scientific by means of agricultural and other colleges, and are thus enabled to analyse the fertilisers and feeding stuffs themselves, without the aid of the County Analyst.

IMPORTANT LICENSING DECISION.

SAMUEL BERTIN, a licensed victualler, of 80, Cable-street, St. George's, was summoned at Thames, on Feb. 26, for selling whisky adulterated with 31 per cent. of water.—Mr. George Hay Young prosecuted on behalf of the St. George's Vestry, and Mr. Maitland defended.—The case was before the Court on the previous Saturday, and was adjourned for the purpose of allowing the magistrate to view the premises, as the defence was that the printed notices that "all spirits were diluted" could easily be seen from the private bar, from which place the whisky was purchased.—Mr. Dickinson, in giving his decision, said: In this case a publican was summoned for selling whisky reduced more than 25 per cent. under proof. That was not denied, but Mr. Maitland, on his behalf, submitted that no offence had been committed, inasmuch as notices, which stated that all spirits sold were diluted, were exhibited in the bar, and that on the authority of two cases, "Sandys v. Small" and "Gage v. Elsey," the defendant was thereby relieved from penalty. With regard to those cases, in both of which the publican

was held exempt, it is to be observed that the purchasers had direct notice or knowledge. In "*Sandys v. Small*" both the Lord Chief Justice and Mr. Justice Mellor said that it was clear that the purchaser was well aware of what he was buying; and in "*Gage v. Elsey*," the inkeeper, before the sale, especially called the attention of the purchaser to the notice posted up that all spirits were diluted. In the present case the inspector's assistant went into the private bar, and swore that he saw no notice, and did not know that all spirits were diluted at that house.—Mr. Maitland asked him if he looked round for notices, and he replied in the negative. There was no obligation on him to do so. To hold so would be to shift the responsibility from the vendor's to the vendee's shoulders, though he had no doubt that a purchaser might not wilfully shut his eyes and deliberately not see what anyone else would observe. A mere notice itself was not a protection, but as Lord Chief Justice Cockburn said, in "*Sandys v. Small*," "it must be duly and sufficiently brought to the notice of the purchaser."—Mr. Maitland asked him to view this house, and he did so on Saturday afternoon. Upon entering the swing-doors of the private bar, though he was on the look-out for notices, he saw none until his attention was called to a notice hanging up, considerably above the line, overlooking the public bar. On the counter in front was a high screen of ground glass, and, certainly, standing there in front of the bar, it was quite impossible for Head, the assistant, to see the notice, though he could do so when he leant his head down and pressed it through the space between the counter and the bottom of the screen. The view, therefore, entirely corroborated the evidence given by Mr. Willey and Head. He found that the notice was not seen by the purchaser. It was not conspicuously displayed, so that it ought to have been seen by him, and was not duly and sufficiently brought to his knowledge, and he did not know that all spirits were diluted. There was therefore a sale to the prejudice of the purchaser, and there must be a conviction. In considering the amount of penalty, however, he might take into consideration all the facts, that there were some notices of dilution, though not visible as they ought to have been, and that there was a margin left upon those notices. The defendant would be fined 40s. and 23s. costs.

THE ISLE OF MAN "TIMES" SPEAKS OUT.

At the Douglas Magistrates' Court recently, John Cannon and Alfred Kewley were convicted of killing and preparing for sale meat which was diseased and unfit for human food. The case, as disclosed by the evidence, was a very bad one. There was no justification. On the contrary, it was shown that there was something very like collusion with the farmer who sold them the cow. If the beast would pass muster—which was a matter of doubt—there was to be a fair price paid for her, but if not there was to be no pay. The veterinary inspector stated that the animal had been dropsical, and had been suffering from tuberculosis in an advanced state. The defendants were fined £2 and costs. We unhesitatingly say that the penalty was inadequate, and, in the interests of the public, we emphatically protest against a sentence which practically places a premium upon a crime—it can be called by no other name—which is much too common. Only a few weeks ago we felt compelled to pass strictures upon a somewhat similar case of culpable leniency. It cannot be denied that it will positively pay men of the stamp of Cannon and Kewley to buy cattle on the chance of their passing the inspector, if the only risk to themselves is the payment of a fine of 40s. A healthy carcase would cost them £10 to £12, and probably a diseased and impoverished one like that so fortunately detected here could be had for a sovereign or two. But what about the danger to the public?

It is not very pleasant reading when we discover that we are liable to swallow the germs of tuberculosis in "nice bright beef." It is positively terrifying when we learn that there is a system of trading "on spec." in animals of doubtful health. And it fills us with anger and dismay when we see that delinquents are punished (?) in a merely nominal sum, with a few shillings costs.

More than two thousand years ago—long before medical science had revealed the existence of disease germs or propounded the doctrine of heredity—the Jews recognised the danger of such practices as these, and, having nothing to guide them but experience and common sense, they stoned the offenders. But in these days our magistrates inflict a comfortable fine. We do not say that the capital punishment is one that would meet the case; but we do affirm that it would not err a great deal more on the side of severity than this paltry fine does on the side of leniency. Only last week a very similar case occurred in Birmingham. The manager of a business which dealt in Colonial meat met with "a good thing" on his own account, and took it "on spec," unknown to his employers. Conviction followed, and the magistrates sent him to gaol for three months "without the option." Now, that was a reasonable punishment—not a bit too severe—but sufficient to make unscrupulous men chary of purchasing diseased meat for human food "on spec."

We have no quarrel with the estimable gentlemen who occupied the Bench on this occasion. Magistrates cling tenaciously to precedent, and Messrs. Cannon and Kewley simply benefited by a pernicious system of leniency. When will the Court of Summary Jurisdiction learn courage? In our opinion, there is no offence which can be summarily dealt with which is more serious than this, and we urge that magistrates should protect the public from serious danger by inflicting the severest penalty that the law allows. Fines—light ones at any rate—do not meet the case: imprisonment is the only punishment that adequately fits the crime. At the same time, we quite agree with our correspondent, "*Fairplay*" (*vide Saturday's Times*), that the farmer who sells the diseased beast to the butcher should also be severely punished.

POISON IN MEDICINE.

At Bow-street Police-court, on February 27, Joseph Wallace, homœopathic practitioner, of 4, Albany-terrace, Regent's Park, and Arthur Russell Salsbury, bookseller, Oxford-street, were summoned before Mr. Lushington for selling a poisonous drug to a person unknown to them without inquiry, without labelling it as a poison, and without being certificated for the sale of drugs.—Mr. Bodkin prosecuted for the Treasury; Mr. Young defended.

Mr. Bodkin said the proceedings were taken under the Pharmacy Act of 1868, and it was alleged that the defendants had committed a serious breach of the Statutes bearing on the sale of poisons in this country. The Pharmacy Act made it illegal for any person to sell poisons or act as a chemist and druggist without being registered as such. Moreover, it was illegal to sell poison without labelling it "poison," or to sell it to an unknown person unless introduced by a person known to the vendor, and even then it was necessary to enter the name of the purchaser in a book. In consequence of information a detective was sent by the Treasury to visit the defendant Wallace at his house in Albany-terrace, Regent's Park, where a medical periodical was published, devoted, among other things, to "*Wallace's Specifics*." The one in respect of which these summonses were issued was known as Specific No. 1. Detective-sergeant Boswell called on Mr. Wallace on November 16, and explained that he was investigating a case of death said to be from taking this specific. Mr. Wallace

supplied him with a bottle of the medicine, after affixing a duty stamp and a label bearing the word "Poison." On January 12 Detective-sergeant Allum went to the house of the same defendant, and asked for a bottle of the same mixture, saying he had been sent by a chemist. He was supplied without inquiry with one of the bottles, on which there was no poison label. The bottles were handed to Dr. Luff, one of the official analysts to the Home Office, and he found that the preparation contained a considerable proportion of a poison known as aconitine, an active alkaloid poison. The quantity of aconitine in the mixture was such that one-sixth of the ounce bottle might probably prove fatal, and a whole bottle would mean almost certain death. At any rate, the contents of the bottles were such as to come within the meaning of poison as defined by the Act.

Mr. Bodkin added that he did not intend to proceed with the summons against the defendants for not being properly qualified chemists, as the Act made it essential that the Registrar of the Pharmaceutical Society should be a party to any such action, and hence there might be some difficulty in recovering the penalty.

Francis Boswell, a detective sergeant in the S Division, stated that on November 16, in company with Sergeant Dixon, he went to Wallace's house. Witness told him he was a detective sergeant, and asked him if he was a proprietor of Wallace's No. 1 specific, which was supposed to have caused the death of a gentleman in London. Mr. Wallace said he very much regretted the gentleman's death. He stated that, theoretically, it was a poison, but practically not.

Cross-examined.—Witness said Mr. Wallace denied that anyone had died from drinking his specifics; that it was more probable that he had died from drinking other drugs, and that he had drunk something in mistake for rum.

Mr. Bodkin: What was it he drank in mistake for rum?

Witness: Wallace's Specific.

Mr. Bodkin: And afterwards died?—Yes.

Detective-sergeant Allum, of the S Division, stated that on January 12 he went to Mr. Wallace's house and asked for Wallace's No. 1 specific. Mr. Wallace at once handed him a bottle of the specific, for which witness paid. It was not labelled "Poison."

Formal evidence was given to show that Mr. Wallace is not a member of the Pharmaceutical Society.

Dr. Arthur Luff, one of the official analysts to the Home Office, stated that he received, on January 15, a bottle from Detective-sergeant Boswell. It contained a fluid ounce of brownish liquid. He tested it in various ways, and came to the conclusion that it contained aconitine in about three-quarters of the quantity of the standard Pharmacy preparation of tincture of aconite. The equivalent of one-sixth of an ounce of this had produced a fatal dose, and he had experimented on mice, and found that this specific and the Pharmacy mixture of aconite produced identically fatal effects. Aconitine was probably the most active poison known.

In cross-examination, witness said it would be absolutely impossible to state what was the minimum fatal dose of aconitine.

Mr. Young, for the defence, said the preparation was not considered a poison. Aconitine was present, but only in infinitesimal quantities. The defendant Wallace was a homœopathic chemist, and said it was against his principles to employ such a drug except in the most minute proportions.

Mr. John B. Coppock, of Preston, said it would require about 13 bottles of this mixture to provide a fatal dose. He was of opinion that one bottle would not do an adult any harm.

Mr. Lushington said it was evident from the evidence of Dr. Luff that the mixture contained more than an infinitesimal quantity of poison. It had been suggested that Mr. Wallace might get out of that difficulty by making the mixture a patent medicine. Possibly he

might do so, but in that case he would have to make a disclosure as to what the medicine was composed of. Until that was done, it was his duty to label every bottle "poison," and to make an entry in the proper book of the persons to whom he sold it. Mr. Wallace would be fined £5 and £10 10s. costs on the first summons, and £5 and 2s. costs on the second. The magistrate ordered Salsbury to pay £2 10s. with respect to each of two summonses.

DISEASED MEAT AT KIRKSTALL.

At Leeds, on March 1, before the Stipendiary Magistrate, George Baxter, Kirkstall, was summoned for being in possession of diseased meat intended for human food. Mr. C. C. Jolliffe, Deputy Town Clerk, prosecuted, and Mr. A. Willey represented the defendant.

Mr. Swallow, Inspector of Nuisances, said that on February 4 he visited the premises occupied by the defendant and there saw in a cellar eight pieces of beef which were unfit for human food. He removed them to Kirkstall Police Station, and subsequently saw the defendant, who said he bought two beasts at Cookridge, and gave £24. When he got them home he ordered his assistant to kill one of them. Later in the day the meat was taken to the premises of Mr. Bowman, veterinary surgeon, for examination.

In reply to the Stipendiary Magistrate, witness said that there was no other meat in the cellar. The portions in question were not cut in joints suitable for sale, although it was dressed in the usual way.

William Petty, assistant inspector, said that on the evening of February 3 he went to defendant's shop and told him he had come to examine his premises. In reply to the question, the defendant said he had nothing in the cellars but beer barrels, but on making an examination he found two hind-quarters and six pieces of fore-quarters of beef which were in a bad condition, and infected with tuberculosis. He afterwards telephoned for the inspector.

Mr. Bowman, veterinary inspector to the Corporation, said that he examined the meat and found it to be quite unfit for human food.

In reply to the Magistrate, witness said that the animal must have been in a very bad state before death. Its condition would be quite evident to anyone who was accustomed to deal with cattle. It would cough and show the same symptoms as a man in an advanced stage of consumption.

Replying to Mr. Willey, witness said that in his opinion the animal must have been suffering from one of the worst cases of tuberculosis he had ever seen.

Mr. Wilkinson, farmer, from whom the defendant purchased the animal, was called at the request of the Stipendiary, and said he sold defendant the beast along with another one for £24. He was not aware at the time that it was suffering from any disease.

The Stipendiary Magistrate inflicted a penalty of £20 and costs, the full amount, for being in possession of one piece of diseased meat, and remarked that he did not think it would be fair to inflict a fine for each of the pieces found in his possession.

MILK.

At Westminster Police-court, on February 16, Albert Barrett, of 11, Sutherland-terrace, Pimlico, was summoned by Mr. Taylor, on behalf of the St. George's Vestry, for selling milk adulterated to the extent of 8 per cent. of added water.—Mr. Hitchens, jun., prosecuted, and defendant pleaded guilty. He admitted adding water, saying he mixed it with the "sweetening" to preserve it. Everybody did the same thing.—Mr. Sheil: I daresay a great many people do, but whenever they are found out they are fined. I have never heard of such an excuse before.—In answer to the magistrate, Mr. Taylor said the defendant appeared to have a pretty big business. He believed he had several

shops in various parts of the metropolis.—Defendant: I have not a big business at all. I have only been there a couple of weeks.—Mr. Taylor said he was guided by the signboard, which was rather an elaborate affair.—Defendant: Yes, but that is only to "make a show." (Laughter.)—Mr. Sheil: You have a lie on your signboard, water in your milk, and seem to deceive everybody all round. It is not a very large adulteration, but you must have a strange notion of what is right and wrong.—Defendant: It was my young woman who made the mistake. If she had put the water into the churn instead of in a couple of quarts everything would have been all right. (Laughter.)—Mr. Sheil imposed a fine of £5 and 12s. 6d. costs, and in default of distress 14 days' imprisonment.—Defendant: I can't pay it.—This was another lie, for when the assistant-gaoler took him to Sergeant Vince he took the money from his pocket at once.

THOMAS HOBBS, manager of the "Grosvenor Stable Club" (Public Coffee and Dining Rooms), 2, Lyall-place, Eaton-place, was similarly summoned. In this case the adulteration was said to be to the extent of 26·3 per cent.—Mr. Hitchens, at the outset, said the house was used by stablemen and others. He did not think defendant had all the profits.—Mr. J. W. Whipp, one of the parish inspectors under the Food and Drugs Act, said he called at the place and asked for a glass of milk. This was supplied by a young lady assistant, and he divided it and had it analysed in the usual way.—Defendant admitted that the milk was adulterated, but it was a mistake. He did not often sell milk, but on the morning when the inspector called they had run short, and diluted a quantity for the purpose of adding to the tea and coffee sold.—Mr. Sheil did not think this would be very encouraging to tea and coffee drinkers. Mr. Sheil asked the inspector what was the nature of the rooms?—The inspector: Public coffee and dining rooms, and the place is well patronised by the general public besides the club members.—Mr. Sheil imposed a penalty the same as in the last case: £5, and 12s. 6d. costs.—Defendant: Can't you make the penalty a little lighter? This milk was not intended for sale. I wish you would make the fine a little lower.—Mr. Sheil: No, I won't reduce it.

REIGATE AND PURE FOOD.

HENRY BOARD, dairyman, of Station-road, Redhill, was summoned at Reigate, on February 13, by Mr. Joseph P. Humphrey, Sanitary Inspector, who bought a pint of new milk which the analyst certified had traces of colouring matter, and a deficiency of 14 per cent. in fat.—Mr. Ricketts appeared for the defendant. He said that the milk in question had been purchased from Mr. Alexander Holm, of Buckland, under a contract in 1894, which stipulated that the milk should be "new milk as it comes from the cow, and with all its cream." Since the date of that contract up to the present date there had been no complaint. On Tuesday, January 19, seven gallons were received by Mr. Board in one churn, and six in another. The sample was taken from the churn containing the seven gallons. The milk would be drawn from the cow between twelve and one o'clock p.m. It was taken and deposited at the bottom of Grammar School Hill, from whence it was fetched by Mr. Board's man. A sample had been sent to Messrs. Redwood and Hales, analysts, who reported a deficiency of 5 per cent. in cream. It was a notorious fact that no two analysts could agree. The Society of Analysts had lately raised the standard from 2·50 per cent. to 3 per cent. Somerset House never agreed with other analysts, and they now took as their standard 2·75 per cent. Milk was not of the same quality in winter as in summer, and this was the time when milk contained least cream. He thought it possible that a mistake might have occurred in this case, and the wrong sample had been analysed. But, supposing

that no mistake had occurred, the certificate only said "traces" of colouring matter, and these might have previously been in the jug used by Mr. Humphrey, as it was only wiped out and was not washed. He cited a case in which the word of the farmer was taken in preference to the evidence of the analyst's certificate. Had the milk been skimmed then Mr. Board would have gained less than threepence, and yet they were asked to believe that he would have sacrificed his reputation for that. Mr. Board's servant had been ten years in his employ and he had every confidence in him. The milk had contained 2·56 per cent. of cream, and this was probably a fair amount at this time of year.—After a consultation the Mayor said they considered the case "not proven," and it would be dismissed. (Applause.) At the same time, they considered that the Inspector had done his duty very properly in bringing the case before the Bench.

PARAFFIN WAX IN SWEETS NOT YET SUPPRESSED.

At the West Bromwich Police Court, on February 8, before Mr. N. C. A. Neville, Stipendiary, Mary Ellen Shelley, Lower High-street, was summoned under the Food and Drugs Act for selling chocolates containing 10 per cent. of paraffin wax. Mr. A. A. Caddick prosecuted, and Mr. J. Clark defended.—Mr. G. W. Davies, Inspector under the Food and Drugs Act, stated that on the 23rd November last he went to the defendant's house and was supplied with a small quantity of chocolate babies, and submitted them for analysis. In reply to Mr. J. Clark, witness said defendant did not say she had withdrawn the sweets from sale. The analyst's certificate was produced showing that the chocolate babies contained 10 per cent. of paraffin wax.—Mr. Caddick explained that the Town Council had instituted those proceedings because it was felt that those sweets adulterated with paraffin wax were dangerous to the health of the children, the wax being absolutely indigestible. A case occurred at Handsworth some time ago when a child died from taking sweets containing paraffin wax. These were the first cases taken in West Bromwich, and they did not wish to press them, but desired to warn shopkeepers from purchasing those unwholesome sweets. They only asked in these cases for a nominal penalty.—Wm. Care, of Chapel-street, Carter's Green, was summoned for a similar offence.—Harry Turner, assistant inspector, stated that on December 31, he went to the defendant's shop, and his (defendant's) daughter supplied him with a quantity of chocolate pipes, which he submitted for analysis.—In this case the Analyst's certificate showed that the pipes contained 1½ per cent. of paraffin wax.—Defendant pleaded that he sold the sweets in ignorance of their adulteration.—Thomas Cartwright, Lower High-street, was summoned for selling chocolate sweets adulterated with 2 per cent. paraffin wax.—The Stipendiary said there had not been any prosecutions of this description in the borough before. People who dealt in sweets must, however, see that wholesale dealers from whom they purchase them sold them wholesome sweets. Perhaps, to a certain extent, no sweets were wholesome, but when they sold chocolates they must be chocolates and not paraffin wax. They must make their wholesale dealers pay the expenses incurred in those proceedings; that was the best way. As the costs were heavy, the defendants would each be fined only 2s. 6d. and the costs. The total amounts in the cases of Shelley and Whitehouse were 36s. 6d., and in that of Care 37s. 6d.

A MILK MORAL.

At the Pontypridd Police-court, on February 24, Evan Thomas, farmer, Llantrisant, was summoned by D.C.C. Supt. Evan Jones, under the Food and Drugs Act with selling adulterated milk on January 18.

Supt. Jones said that, in consequence of several com-

plaints, he went to Pontypridd Railway Station on January 18, and took a sample of milk from a tin which bore a label from Evan Thomas to a man named Bayliss at Norton Bridge. He divided the sample and sent one to the Public Analyst, Swansea. On February 6, witness received the certificate from the Analyst, which showed that the sample contained 82 per cent. of milk and 18 per cent. of added water.

Defendant had no explanation to offer, and he was fined £1 and costs, amounting to £3 1s. 6d.

In this case the wholesale dealer was charged, and after the service of summons several gallons less were sent by him to Mr. Bayliss, Pontypridd, the retailer.

BUTTER.

At the Todmorden Petty Sessions on February 25, Messrs. S. and W. Stansfield, grocers, Dale-street, Todmorden, were fined £3 and £3 9s. costs for selling adulterated butter on the 21st ult. Mr. W. H. S. Crabtree, inspector for the County Council, purchased from the defendants $\frac{1}{2}$ lb. of Irish butter, which on analysis was found to contain 37 per cent. of added water. The defendants produced an invoice which purported to give a warranty that the butter was all right. The Bench held that the warranty was not sufficient.

SAFE AND UNSAFE MINERAL OILS FOR LIGHTING AND HEATING PURPOSES: with Practical Suggestions for the Treatment of Unsafe Oils: also Observations on Oil Lamps and Stoves.

DR. STEVENSON MACADAM is still carrying on the good work of educating the thinking part of our population on the real causes of lamp explosions. Before the Royal Society of Arts at Edinburgh, last month, he spoke on this subject, saying that it was very important and interesting, alike on account of the extensive use of mineral oils, and the many accidents to life and property which were yearly occurring. These accidents occurred mainly from the use of unsafe oils. The whole question of mineral oils had been known to him since the commencement of the industry, and he had conducted many original investigations into the safe employment of those mineral or paraffin oils, including lighthouse illumination; and it was worthy of notice that, employing a safe oil in the majority of the lighthouses of the country for some twenty-five years, there had never been any mishap. As early as 1862, Parliament passed an Act, known as the Petroleum Act, under which were included the oil products which were dangerous to life and property, and which were to be recognised by their giving off "inflammable vapour at a temperature of less than 100 deg. Fahr." That Act clearly recognised that mineral oils which thus gave off inflammable vapours were not safe oils for general storage and use, and that such oils should be classified with gunpowder, for the protection of the public. There were no specific directions given in the Act of 1862 for the mode of testing the oil, but each chemist or expert was expected to use the best method for the purpose. The standard of safety of 100 deg. Fahr. had been recommended to the Government by the late Dr. Letheby, having due regard to his experimental observations that no storage-place, room, or lamp, in burning, reached such a temperature. Experience in modes of applying the test led to different results being recorded, and in 1868 the Government again took up the subject, and consulted Dr. Letheby, Professor Abel, and Professor Atfield as to the best method of carrying on the test. After experiments they issued a report, with directions for using a half-full cup of oil, and a flame being brought down on the surface, for the determination of the flash-point of the oil, and they adhered to the 100 deg. F. as the safety-limit. Those directions

were fully stated in a schedule submitted to the House of Commons, and had they been adhered to there would have been no subsequent difficulties as to safe and unsafe oils. Unfortunately, the working schedule was altered in a week thereafter, on a statement made by the Petroleum Association to Sir James Fergusson, who had charge of the Bill, and which he had submitted to Professor Abel, and who had agreed thereto under the impression that the altered schedule would leave matters as strict as before. That was a mistake, however, but the original idea of 100 deg. being the proper standard degree of safety in testing mineral oils was still acknowledged and adhered to. The altered schedule became law, and caused no end of discrepancies in testing, to overcome which it was suggested that the deficiencies of the tester should be met by placing a cover on the top, and making it a close tester instead of an open tester. That tended to bring the testing back in accuracy to the original working schedule of 1868. In 1872 a committee of the House of Lords took evidence as to the differences in the flashing-point of the same oil—given by the open tester of the altered schedule of 1868—and the close tester, and gave the opinion that 18 deg. F. might be regarded as the average proportion in which the close tester was more accurate than the imperfect 1868 schedule; and, losing sight of the original standard of 100 deg. F. being the standard of safety, below which the escape of inflammable vapours from an oil would not be safe, they suggested that the 18 deg. of difference thus got should be deducted from the 100 deg. F., and that the safety line should be fixed at 82 deg. F.; in other words, the committee proposed that the standard should be lowered to suit the oil and cover the deficiencies of the 1868 altered schedule mode of testing. No legislation followed on that inquiry, but subsequently Professor Abel was asked by the Government to report on the matter, and, after communicating with various bodies, he brought out what was now known as the Abel tester, and announced that the difference in the results given by the new apparatus, and the plan of the altered schedule of 1868 was 27 deg. F.; and he recommended that the standard of 100 deg. F. of safety be reduced by 27 deg., making it 73 deg. F. That figure appeared in the 1879 Act, and had continued since to be the legalised temperature whereby to judge of mineral oils for ordinary or domestic service, notwithstanding that mineral oils in actual use for lighting and heating generally reached higher temperatures, and must be giving off inflammable vapours, which were dangerous to life and property. It was worthy of notice, however, that while the general public could thus be supplied, under legislative sanction, with low-flashing oils, the Government continued to demand high-flash oils of 125 deg. F. and upwards for lighthouse service, and above 100 deg. F. for the public service, such as for use in barracks, where the storage arrangements and style of lamps were superior to those which could be expected in the smaller houses of the working classes, and where more trained and skilled attention could be directed to the use of the oils than could be obtained in ordinary domestic arrangements, especially in poorer districts. The oils which could be purchased in shops, might be either high-flashing above 100 deg. F., and comparatively safe, or low-flashing and unsafe oils of 73 deg. F. The shale oils produced and used principally in Scotland were high-flashing oils, but there were also American and Russian oils, which were being sold in Scotland, though not so common as in England, and which were low-flashing oils, and evolved inflammable vapours between 73 deg. and 83 deg. F.; and practically all the accidents happened with those low-flashing oils. The dangerous character of those oils was due to the presence of about 10 per cent. of lighter naphtha or spirit, which could be readily removed by distillation from both the American and the Russian oils, so that

the remaining 90 per cent. would become of high-flashing quality (above 100 deg. F.) and would enter the class of practically safe oils. The removal of that spirit did not influence the burning quality of the remaining oil, and the spirit itself was a marketable commodity, for which there was likely to be greater demand in the future, for dry cleansing purposes, and in the motors of auto-cars, etc. Even although the whole of the spirit was useless, and was thrown away, it would be one-tenth of the quantity of the present unsafe oil, which in America and Russia cost 2½d. per gallon, so that a ¼d. per gallon would represent its value. That dangerous naphtha or spirit could easily be separated from the burning oil during the original distillation, or by subsequent distillation, or by slight heating and passing air through the oil. There was, therefore, no reason why the dangerous element in the bulk of the American and Russian oils sent to this and other countries should not be kept out, and the Americans knew how to do it, for at present they did prepare high-flashing oil for use in many of their own States which would not have the low-flashing oils; and they even sent to this country a small supply of their higher-flashing and practically safe oils. The employment of the various classes of oils in a large number of lamps of different constructions, sizes and prices revealed this important fact—that in burning, the temperature of the oils in the founts of the lamps generally ranged from 10 deg. to 20 deg. above that of the room; so that if the temperature of the room were 70 deg. Fahr., the oil in the fount of the lamp would be from 80 deg. to 90 deg. Fahr. Some lamps, and those often the more expensive ones, heated the oil in the founts even more highly. It was evident, therefore, that low flash oils, such as the ordinary American and Russian oils, which evolved inflammable and explosive vapours at from 73 deg. to 83 deg. Fahr., could not be regarded as safe in the founts of lamps where the temperature might be 90 deg. Fahr., and even higher. Many lamps were badly constructed, and heated unnecessarily high during burning, the temperature of the oil in the fount rising to 100 deg. Fahr., and even 110 deg. Fahr., when there were deficiencies in the air spaces, foul wicks, dirty fittings, etc.; but even the best of lamps—say a good domestic duplex, with a temperature of 90 deg. Fahr. in the fount—could not be regarded as safe with a low-flashing oil of 73 deg., or even 83 deg. Fahr., while it would be practically safe with a high-flashing oil of 100 deg. Fahr. and upwards. No lamps should be considered satisfactory where the oil in the founts exceed 15 deg. Fahr. above the temperature of the room. Suggestions for the construction of safe lamps for mineral oils specified that the founts should be of strong glass; that the metal base should be fully as great in diameter as the fount; that the burners should be fully supplied with air-holes, for the proper combustion of the oil and the cooling of the fittings; that the wick should be of soft cotton; that the fount

should not be capable of being filled with oil while the lamp was burning; and that no oil flashing below 100 deg. Fahr. should be employed. Heating-stoves ought to conform to similar conditions, and should always be provided with trays underneath, to keep escaping oil from getting on to the floor. Standard lamps, as now used in entrance halls, staircases, and even drawing-rooms, with their tops, heavy shades, and flimsy trimmings, were especially dangerous, owing to their liability to be thrown over, and setting fire to the furniture, carpets, and even the clothing of the inmates. Such lamps, if used at all, should be bolted to the floor or walls. A special danger of low-flashing oils was the readiness with which they evaporated or volatilised on mere exposure to the air. Trials showed that such American and Russian oils lost, in two days, 5·5 to 6 per cent. of their bulk; in three days, 7·9 to 8·5 per cent.; and in twelve days, 23 to 27 per cent. High-flash oils did not lose one-half of that proportion. When low-flash oils fell upon cloths, curtains, carpets, blankets, or ordinary clothing, and a light approached them, the oils inflamed immediately, and the conflagration spread rapidly; whereas high-flash oils, under similar circumstances took fire much more slowly, and the flame also travelled more tardily. In the latter case, therefore, there might be time to stamp out the flame before it had gained a head. The question of unsafe oils was becoming more urgent, even in Scotland, owing to the fact that low-flashing oils, principally American, were being sold in shops, and from travelling carts, without any warning as to their dangerous character. Samples bought in Edinburgh flashed at 76, 78, and 79 deg. F. Such oils were not safe for use by the public in ordinary lamps for indoor purposes, and all the more so that they might be sold in the poorer districts, and burned in imperfect lamps in small, stuffy, ill-ventilated, and often highly heated and crowded rooms. The disastrous accidents so-called, which occurred year by year, and which led to so much destruction of property and so many deaths—between 300 and 400 a year—should arrest the attention of the Government to the decided inadequacy of the present standard of 73 deg. F. being sufficient for public safety, and should lead to a return to the original idea of 100 deg. Fahr. at least, which all experimental observation supported, and which should never have been reduced. It was right to say that the Government, through a House of Commons Committee, had this year been taking evidence on the subject, and it was to be hoped that that Committee would continue their labours until the proper safety standard should have been restored. In the meantime the intelligent public should protect themselves by purchasing the mineral oils they required under a distinct guarantee that the oil vended to them had a flashing-point of 100 deg. F. or upwards; in other words, that it did not evolve dangerous inflammable vapours under that temperature.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, MARCH 13TH, 1897.

SANITARY INSPECTORS' ASSOCIATION.

ANNUAL DINNER.

THE Sanitary Inspectors' Association held, very successfully, its fourteenth annual dinner in the Venetian Chamber of the Holborn Restaurant on Saturday last, when Sir John Hutton, L.C.C., the new President, occupied the chair. Right and left of the chairman were the Venerable Archdeacon Sinclair, Sir Arthur Arnold (Master of the Carpenters' Company), Major General Moberley, R.E. (Chairman London School Board), Professor Crookshank, Professor Atfield, F.R.S., Professor Corfield, Dr. Shirley

Murphy, M.O.H., Dr. Harris, M.O.H., Dr. Newsholme and other representatives of the medical profession. The Paris Society of Hygiene had sent as delegates Dr. Brémond (vice-president) and Mr. Nicholson; Dr. de Piètra Santa, the veteran president of the society, excusing himself in a sympathetic letter for not venturing at his age (76) to cross the Channel at this season of the year. The Lancashire and Cheshire branch of the Association was represented by Dr. J. M. Rhodes, the Yorkshire branch by Mr. T. Fridgin Teale, M.A., F.R.S., their respective presidents. The Corporations of Windsor and Maidstone were well represented, the former by Mr. Alderman Dyson and Mr. Councillor Mitchell, and the latter by Mr. Alderman Spencer and three Councillors—Messrs. Baker, Clifford and Elmore. The Surrey County Council was represented by Dr. Seaton and Essex by Mr. Councillor Whittingham. The leading members of the Council, headed by Mr. W. W. West (the chairman), presided at the side tables, the company including the representatives of the *Times* and several other daily papers, *The Builder*, *Food and Sanitation*, *London*, *The Councillor*, and the journal of the Association, which was represented by Mr. E. Tidman, C.E., the honorary secretary. After the loyal toast, proposed by the president, the "Houses of Parliament," by Alderman Whittingham, the "Army, Navy and Reserve Forces," by Mr. Alderman Spencer, to the last of which Major General Moberley briefly replied, the president gave the toast of the evening—"Success to the Sanitary Inspectors' Association."

He regretted that during the past year death had removed that distinguished man, Sir Benjamin Ward Richardson, their late president. The honour of succeeding him as president had fallen to him, and he had gladly accepted, however much he felt his inferiority to his distinguished predecessors, because he desired to be of use to that interesting and important association, the members of which were, above all things, thorough. The association had much more than justified its existence. Incorporated in 1891, it numbered in 1895 349 members, but at the present date it stood at a figure which brought it within a very few of 700. Reference was made by the president to some of the most important objects the association had in view. The first was the "Superannuation Bill," referred to by a previous speaker which the association had joined other municipal officers in promoting in Parliament. Another object of pressing importance was that Sanitary Inspectors should enjoy the privilege which had been granted to Medical Officers of Health of greater fixity of tenure of their offices. Sanitary Inspectors ought not to be subject to the caprices of members of Boards, who were not always the best qualified men to sit upon those Boards. It would be infinitely better for the general public if these useful servants and the families dependent upon them were protected from some of the many risks of their dangerous calling, and that a generous consideration should be given to their case. A satisfactory feature of their work was that the association desired to effect reforms from within. They sought to increase their own knowledge, and to make their mental equipment adequate to the greater calls which the future would make upon them. The authorities should give them a voice in the examination prescribed for members of their own body. The influence of the association was not limited to London but extended to many of the distant provinces of the country. The time would come when the State would be willing to grant them greater immunity from the risks they ran and would more readily accede to the claims of the members of an association which was of so much national importance. Dr. Milson Rhodes proposed the toast of "Local Government," to which Sir Arthur Arnold was called upon to respond. The Chairman of the L.C. Council illustrated the progress of sanitary reform during the last forty years by contrasting the sanitary work voluntarily performed in London at the present time by more than 3,000

members of Vestries who gave their services, with the state of things found at that time when no sanitary inspectors existed, or had not a proper knowledge of their duty. It was not uncommon then to find houses of the value of £60 or £80 a year built over open cesspools, and the situation, from a sanitary point of view, of the middle classes, was worse than is now the case of the poorest. Forty years ago men lived somehow which seemed to prove that bad smells did not kill people. He thought that what people ate and drank rather than what they breathed was the cause of the mischief. He hoped that sanitary inspectors would get all their requirements, and that their humanitarian work of preserving the health of the community would flourish and prosper to the great benefit of the people of this country.

Archdeacon Sinclair, in proposing the toast of "Education" was similarly retrospective. He recalled the fact that when the present Archbishop of Canterbury had become Bishop of London, it had been found necessary to spend £4,000 upon the sanitary arrangements of his house before it became habitable. He thought that in this grand citadel of education, containing 4,000,000 souls, more might be done with regard to sanitary science, which ought to be taken up as a special subject throughout the whole country. The Sanitary Inspectors' Association had a great opportunity amongst the classes in whose midst their work laid, and they could give a great deal of useful knowledge. He suggested that amongst these special subjects there should be a class for architects, because there was no branch of which they were so ignorant as the sanitation of public buildings. When he (the speaker) found himself in certain churches his feelings were often very far from sanitary. He congratulated the London County Council on having devoted £150,000 derived from the Spirit Duties to the purpose of secondary education, and he eulogised amongst educational bodies the trustees of St. Paul's School, the Yorkshire College (Leeds), and the Carpenters' Company, this toast being coupled with the name of the Master of the Company.

Mr. J. Jacob (Master of the Company) having briefly replied, Mr. Alderman Dyson proposed the toast "Science and Art," to which Professor Atfield and Professor Crookshank severally responded. Professor Crookshank said we had reason to be proud of the work of the sanitary inspectors of this country. Their results were not telegraphed to the papers as were the results of a scientist who had discovered a new bacillus, but their work was of a solid character, and might, perhaps, claim to be regarded as one of the causes of the leading position which this country had taken in sanitary matters among the nations of Europe.

"The Health of the President" was proposed by Mr. F. O. Crump, Q.C., and at the close of the brief reply made by the Chairman, Mr. H. Thomas, Chief Inspector, Bermondsey, was called upon to receive at his hands a handsome timepiece and an illuminated address, subscribed for by the members, in recognition of his devoted services to the Association as chairman of the Council during the past three years. Mr. Thomas suitably replied. To the toast of "The Visitors and Guests," which was the next proposed, Mr. C. Nicholson, of Paris, responded for the vice-president and himself, and read the friendly greeting of Dr. de P. Santa, who declared himself the devoted disciple of the deeply regretted late presidents, Sir Edwin Chadwick and Sir B. W. Richardson, and in his message the French President congratulated the association on the character of its journal, which he ranked amongst the best of those publications of the English and French Press which were spreading far and wide the benefits of sanitary progress.

The Rev. G. Martin also responded to the toast.

The healths of the new Chairman of the Council, Mr. W. W. West (Walthamstow), Mr. C. W. Raymond (hon. treasurer), and the hon. secretary, Mr. E.

Tidman, C.E., were proposed by Dr. Shirley Murphy, each of these officers replying in turn. Mr. West said that the association was formed 12 or 14 years ago, because it was felt that improvements in the status of the Sanitary Inspector were necessary in the public interest, and it had succeeded to a very considerable extent in its objects, but it had not yet entirely succeeded. Some public bodies were not easily satisfied. They had had successful meetings in many places outside London, in Leeds, Brighton, Glasgow, etc., and they had been cordially welcomed as brothers by the *Société Française d'Hygiène*, in a Republican country, and their representatives had been received by the King of Sweden. Mr. Raymond simply returned thanks for the compliment, and the Editor of the journal, in doing so, invited any member of the association who had any trouble to communicate it to him, and he would attend to it for him.

The last toast, "The Press," proposed by the ex-Mayor of Maidstone, Mr. Councillor Barker, was responded to by the representative of *The Builder*. The Association had, he said, such multifarious subjects under discussion that they must at times be disappointed because nothing appeared. In the journal he represented, for example, while a discussion on house drainage might be of interest, one on tuberculosis or meat inspection would not. It struck him that there was a good deal of similarity between the work of the journalist and that of the sanitary inspector in regard to the great variety of the subjects that had to be dealt with. Some surprise was felt that the toast of the press was not entrusted to the old and tried friend of the Association, Mr. E. Guest, who has done so much for years to advance the Association's interests.

THE LONDON WATER SUPPLY.

By W. J. DIBDIN, F.I.C.

At a meeting of the London section of the Society of Chemical Industry, Mr. W. J. Dibdin, chemist to the London County Council, read a paper on "The Character of the London Water Supply." Dr. Messel presided. Mr. Dibdin explained that the main object of the paper was to point out certain improved methods employed by him in the course of a series of daily analyses which he had recently been called upon to make of London water. The analyses brought into prominence a point of interest which had hitherto been to a great extent overlooked—i.e., that the various matters held in suspension in presumably pure waters, although small in quantity, were yet often of such a kind as to throw considerable light upon a sample of water, even after the old methods of analysis failed to distinguish the difference between one sample and another. Having described the process adopted, he submitted a number of tables showing the relative quantities of suspended matter in the various supplies, and compared the results by the micro-filter and by the gravimetric method. The practically complete coincidence between the various methods of examination was very striking.

The unfiltered river water contained a mass of matters of generally indefinite character included under the head of *débris*; but, in addition to these, certain noticeable features were distinct, amongst which the diatomacæ were predominant; entozoic worms, various dyed and undyed textile fibres, such as wool, cotton, silk, etc., were not infrequent; together with numerous infusoria and bacteria. The results of the examination of the filtered supplies indicated the frequent presence of all these substances. Diatoms were almost always present, and not infrequently anguillula also; but the most noticeable and objectionable feature was the frequent presence of fragments of matter in a state of decomposition and swarming with bacteria. The presence of such particles could not be accepted as inevit-

able in the case of a pure water supply. From the experience now obtained it would seem as if the number of bacteria depended more upon the quantity of suspended matter than on any other factor. The examination of the daily samples of water for the number of bacteria had yielded interesting results, and afforded further evidence of the improvement effected in the various filtered supplies. Mr. Dibdin submitted tables showing the improvement between 1892 and 1895, and the further improvement in the course of last year. Proceeding, he compared the present London supply with the proposed supply from Wales, remarking that from a comparison of the average results of nearly 3,000 analyses it was evident that the organic impurity of the unfiltered Welsh water was a little less than that in the average filtered London water. The unfiltered Welsh water examined on the spot contained twenty-six microbes per cubic centimètre, whilst the average London filtered waters contained in summer 167, and in winter 298, the Kent supply containing ninety. By the adoption of Clarke's system of softening, the present supply, in respect of its chemical quality and number of bacteria, would be improved to a degree comparable with that of the Welsh sources. A discussion followed.

SKIMMED v. SEPARATED MILK.—IMPORTANT CASE.

AT Kensington Petty Sessions last week, an important case affecting persons connected with the milk trade came before the Kensington Bench of Magistrates at the Town Hall. Mr. H. B. Halswell presided, and the magistrates present were the Rev. C. Darby Reade, M.A., Mr. John J. Wheeler, and Mr. William Bird, D.L. (chairman of the Bench, who was unavoidably absent during the earlier part of the proceedings).

The Bench first heard the case of the Kensington Vestry v. the Belgrave Dairy Company, proprietors of the Havant Dairy Factory, at 39, Paddington-street, Marylebone. The summons was for selling an article not of the nature and substance demanded. Mr. Courthope Munroe, instructed by Messrs. Pontifex, Hewitt and Pitt, appeared for the Vestry, and Mr. W. L. Bell, instructed by Messrs. Robinson and Denvers, for the defendants.

Mr. Munroe, in opening the case, said there were four cases against the defendants, but, with the permission of the Bench, and with the consent of his learned friend, on the opposite side, he would take the four cases together. This course having been agreed to, Mr. Munroe briefly opened his case, stating that on January 25 an inspector in the employ of the Vestry—and he was bound to tell the Bench that the Vestry had given this matter their most careful consideration—had ordered these proceedings. The man in charge of the barrow was asked by the inspector for a pint of milk, and he replied that he did not sell anything but skimmed milk. The samples were taken in the ordinary way. There was also a handbill displayed, stating that the article sold was Pasteurised rich skimmed milk, not deprived of all cream. This, said the learned counsel, was a matter of the greatest importance to poor people, who obtained their milk in small quantities.—Arthur Ellenden, an inspector under the Sale of Food and Drugs Act, in the employ of the Kensington Vestry, said that on January 25 he saw two barrows in Edge-street, both belonging to the Havant Dairy Factory Company. He was told by the man in charge of the barrow that it was skimmed milk. There was also a small disc on the barrow bearing the words "twopence farthing a quart." A handbill was also exhibited as follows:—"A Public Boon. The proprietors of the Havant Dairy Factory have arranged to supply residents in poor districts with a really wholesome and thoroughly safeguarded rich (partially) skimmed Pasteurised cheap milk, not deprived of all the cream, at 2½ per quart, delivered,

and at 2d. per quart if fetched from their Havant Dairy Factory Depôts, at 6 and 7, Edward-street, Brighton; 39, Paddington-street, Marylebone, W.; 45, Warwick-street, Pimlico; 4, Hendon-street, Victoria-station, S.W.; and 13, Little Chester-street, Belgrave-square. Pasteurised cheap milk is more suitable than any ordinary cheap milk for children and invalids. The disease-producing organisms are destroyed. This Pasteurised milk is not only a cheaper, safer, and more digestible milk than any other class of cheap milk, but is, if anything, more wholesome and equally palatable, whilst it is very superior for hotel, restaurant, and kitchen purposes. A trial and public support is solicited. Orders addressed to 'Manager,' at nearest of above depôts will be at once attended to." On the other side of the handbill was an extract from a provincial newspaper, in which, among other facts connected with this matter, it was stated that, "among the latest developments of sanitary science in connection with modern dairying is that of Pasteurised milk, which is milk sterilised by a newly-invented process whereby the cooked flavour attached to milk sterilised by boiling is avoided. The process is accomplished by the use of specially-constructed modern machinery, and by this treatment the disease-producing organisms are destroyed, while both the nature and flavour of the milk are maintained without interfering with the primary beneficial or sterile character. It is claimed for Pasteurised milk, that it is more suitable than any ordinary milk for children and invalids, and that it is not only cheaper, safer, and more digestible than any other class of cheap milk, but is, if anything, more wholesome and equally palatable. Arrangements have been completed by the Belgravia Dairy Company (Limited), to produce milk safeguarded by Pasteurisation at a factory specially erected at Havant. Upon a platform set on girders is fixed "The patent Pasteur-Chamberland filter through which all the water used in the factory, for boilers, steam, and cleansing purposes, etc., are thoroughly purified by the system of Pasteurisation, which arrests all micro-organisms and prevents the ingress of any other impurities. The heating, followed by instant severe refrigerating, is the process called Pasteurising, which effectually checks the development of all pathogenic micro-organisms, and leaves a keeping product, thoroughly safeguarded from conveying infectious disease." In reply to Mr. Bell, the witness stated that there was no attempt to conceal the fact that the article sold was "skimmed milk." There was also a similar announcement on the churns and cans. He was not aware that a letter had been sent to the Vestry by the defendants.—Mr. Bell read a letter sent by his clients to the Vestry, informing them of the nature of the article to be sold, and the name that would be given to it on their barrows.—After hearing the evidence of Herbert Hawkins, an inspector in the employ of the Vestry, Mr. Charles Edward Cassal, the public analyst, was called. He said he received the sample from the witness Ellesden. He made an analysis, and found the sample contained milk devoid of fat. It was submitted to him as skimmed milk. The remaining 7 per cent. was milk of a genuine composition, but of the poorest quality. It was not correct to call it skimmed milk, because the term was used for milk from which the fat had been removed by the process of skimming. According to his experience, it was impossible to remove more than 63 per cent. of the original fat. That involved as many skimmings so long as the milk was thick enough to skim. By the process adopted in the present case it was possible to extract the whole of the fat; it was really done by centrifugal force.—By Mr. Bell: Speaking from a chemical point of view, he should say that separated milk was practically of no use whatever. It was absolutely false to describe the article as it was described on the barrow. He was aware that it was the practice to heat the milk for the purpose of killing the

germs or the micrococci, but if this was done then the milk should not be sold in open vessels, passed from hand to hand.—Mr. de Hales, an analytical chemist, of Red Lion-square, was called for the defence. He said that his firm had analysed thousands of samples of milk. In these days there was no such thing as hand-skimming, except where a small quantity of butter was required for home consumption. He regarded skimmed milk and separated milk as the same thing.—After a prolonged discussion as to the difference between "separated" and "skimmed" milk, Mr. Bell submitted that this was not a case in which an attempt had been made to defraud the public; the sale to the inspector was perfectly fair and above-board.—The Bench decided that there was a suggestion of dishonesty on the label affixed to the barrow, stating that the milk was "rich," and inflicted a fine of 10s. in each of the four cases, with three guineas costs, including the analyst's fees in each case.—Mr. Bell, on behalf of his clients, asked them to state a case.—This was agreed to by the Bench.

MARGARINE AS BUTTER.

PROSECUTION AT MILDENHALL.

At Mildenhall Petty Sessions, on February 26, John Waller, a florist, was charged under the Food and Drugs Act with selling one pound of butter which contained 60 per cent. of fat other than butter fat on January 28.—Supt. Reeve prosecuted, and was represented by Mr. T. P. Bendall, Mr. C. Salmon appearing for the defendant.—From the evidence it appeared that John Bittern was sent to the defendant's house by the police for one pound of butter, for which he paid 1s. 1d. The butter was submitted to Mr. J. Napier, Ipswich public analyst, for analysis, with the above result.—The servant at defendant's stated she served the butter to Bittern. When informed by Police-constable Nunn that the butter was for analysis, the defendant replied, "It is not butter; it is margarine."—Mr. Bendall submitted that the defendant had been dealing in margarine as fresh butter, and asked for a substantial penalty.—For the defence, Mr. Salmon stated that the servant went to the door in answer to Bittern's knock, took the order for one pound of butter, and went to the pantry, where Mr. Waller was at the time. The defendant, knowing the man had called, asked the girl "how much," to which she answered "one pound," the word butter not being mentioned. The girl took the money (1s. 1d.) and placed it, as was her custom, on the kitchen mantelpiece, and therefore Mr. Waller did not know how much had been paid. The margarine was sold at 9d. per lb., and the butter at 1s. 1d.—The Magistrates fined defendant £10 and 16s. 6d. costs.

ADULTERATED MILK AT JARROW.

SMART FINE.

At the Jarrow Police Court on Monday, February 22, John Carter, milk dealer, of East Jarrow, was summoned by Mr. Edward Batey, sanitary inspector, for having on the 2nd inst. sold milk which was adulterated with 17 per cent. of added water.

Mr. Charlton, deputy town clerk, prosecuted, and said that, out of a number of samples which had been taken on the date named, this was the only one which was not genuine, and it had been certified to contain 17 per cent. of added water. It was the wish of the Council that a practice like this should be stopped, and they hoped that such an order would be made as to prevent the defendant, and others like him, from carrying out the practice. He mentioned that so glaring a case had not happened for 17 years.

Mr. Edward Batey, sanitary inspector, said on the 2nd inst. he saw the defendant's boy going up High-street with the milk cart. He bought some milk from

him and divided it into three parts, sealing each bottle and marking it No. 3. He told the boy that he had bought the milk for the purpose of having it analysed. Next day he took the sample to Darlington, and he had since received a certificate from the analyst saying that it was adulterated with 17 per cent. of added water. The boy told witness that his name was John Carter, and that he was the son of John Carter who kept the dairy at East Jarrow.

Mrs. Carter said there was a big mistake somewhere. They had never had a word about the milk before; they only supplied the best quality of milk. They had dealt in milk about seven years.

In reply to the Bench, Mr. Batey said he took an average of 40 samples of milk per year. A few years ago they had several cases of heavy adulterations, and in three months fines amounting to £17 were imposed; since then they had not had a case so bad as the present one.

In reply to Mr. Charlton, Mrs. Carter said her husband worked in the factory; they had been once before convicted, about seven years ago.

Superintendent Fleming said the conviction was on November 7, 1889, when defendant was fined 20s. and costs.

The Chairman said the Bench felt it to be a very serious case. The public must be protected against this sort of thing, but as it was some time since they had been there before, the penalty would not be so heavy as it would otherwise have been. A fine of £5 and costs would be imposed, failing which a distress would be levied, or, in default, two months' imprisonment.

AN EXTRAORDINARY DECISION *re* WHISKY.

We have seen many curious instances of justices' justice recorded, but the following happy mixture of magisterial muddling and Excise nonsense would be hard to beat. What Mr. Cloughry, Excise officer, had to do with the case we cannot understand. The Act is clear that any person selling whisky such as was sold in this case, contravenes the law unless specific notice was given to the purchaser that the article was not of the 25 U.P. strength laid down in the Act, and granting all the awe and reverence one is bound to pay the average Excise man, such a person's views are not, at least, to our knowledge, entitled to override an Act of Parliament.

The case occurred recently at Chippenham Petty Sessions, and is reported as follows in the *D. vices and Wiltshire Gazette*, of Feb. 11:—

Eliza Jefferies, proprietress of the refreshment rooms at the railway station, was summoned at the instance of the Wilts County Council for contravening the 6th Section of the Food and Drugs Act Amendment Act, by selling Irish whisky 35·68 under proof.—Mr. Bevir appeared for the prosecution, and Mr. Titley represented the defendant.—From the evidence of the prosecution it appeared that the whisky was purchased by Sawyer, the assistant inspector, on December 1. He handed it at once to Smith, the chief inspector, who divided it in the usual way into three parts, one of which was sent to the county analyst, who certified that it was 35·68 under proof, viz., 10·68 of added water, in addition to that permitted by the Act. For the defence, the store-keeper in the employ of the defendant stated that the whisky was sent to the rooms in August, 1895, and it was then 23 degrees under proof. In his opinion it was due to evaporation. In confirmation he stated that a hogshead of whisky in the stores on February 7, 1892, was 9·5 over proof, and he tried it that day and found it 26 under proof. His testimony was confirmed by Mr. Cloughry, an Excise officer, who said the Customs authorities allowed 12 per cent. for evaporation in casks under 80 gallons, when in bond

not exceeding two years. After hearing the evidence of the manageress and her assistant that the whisky had been in stock since 1895, Mr. Cloughry said it was nothing more than he should expect that the whisky would rise from 23 to 35 under proof by the mere evaporation of spirit. Mrs. Jefferies stated that she gave strict orders to all her managers that only goods of the best quality were to be sold, and the manageress and her assistant said that no water had been added to the whisky.—The Bench, after hearing the arguments of the counsel on each side, retired to consider their verdict. On their return the Chairman said the Bench were unanimously of opinion that the charge had not been proved to their satisfaction, and they therefore dismissed the case.—Mr. Bevir: The Bench find, as a fact, that no water has been added, and that the deficiency arose from evaporation.—The Chairman: Yes.—In reply to Mr. Bevir, the Chairman said they would be prepared to state a case.

BEST ALE UNDER THE SUN, BUT NOT THE BEST WHISKY.

At Durham, on February 17, John Lisgo, innkeeper, the Rising Sun Inn, New Durham, was summoned under the Food and Drugs Act for adulterating whisky beyond the limit allowed by the Act.—Mr. B. Scott-Elder (chief inspector under the Food and Drugs Act) conducted the case, and stated that on the 26th January his assistant, George Wilson, was purchasing samples at New Durham, when he called at the licensed premises occupied by defendant. The officer purchased one pint of whisky from Mr. Lisgo, who served it, and paid 2s. for the spirit. His assistant informed Mrs. Lisgo for what he wanted the whisky, and he divided and left one portion with them, and another was sent to the County Analyst (Mr. Stock). His certificate of analysis showed that there were 34.90 degrees under proof. The amount allowed by the Act was 25 degrees under proof, but in defendant's whisky there was 12 per cent. more water than was allowed. Defendant had a notice outside his premises to the effect that he "sells the very best ale under the sun." (Laughter.) Defendant was fined 10s. and costs.

SPIRITS.

At Heanor, on March 1st, Thomas Bancroft, landlord of the Mundy Arms, Marlpool, was summoned by Captain Sandys, inspector of weights and measures, for selling adulterated rum on January 18, alleged to have been 30 degrees under proof. Captain Sandys stated that he purchased half-a-pint of rum, for which he gave 1s. The sample was divided into three parts, one of which was handed to the public analyst, whose report showed the rum to be 30 degrees under proof. Prosecutor also purchased some whisky of defendant, but that was not under proof. Defendant was fined 20s. and 21s. costs.

MILK.

At Tunstall, on February 25, John Potter, cowkeeper, Madeley-street, Tunstall, was charged with selling milk not of the nature, substance, and quality of the article demanded. Mr. E. W. H. Knight, inspector under the Food and Drugs Act, prosecuted. It was stated that Charles Gifford, an assistant to the inspector, purchased a pennyworth of milk from the defendant, who was retailing milk in Park-terrace, in two small cans on January 22. The county analyst certified that the milk contained 19 per cent. of added water, and 11 per cent. of the cream had been removed.—Defendant said he sold the milk exactly as he had received it from the farmer.—Mr. Knight said if the defendant had come and seen him after he got the summons he would have endeavoured to have seen the farmer.—Defendant said

he spoke to the farmer after he had the summons, and the latter told him that he did not pay the price for good milk. Defendant admitted that he had three gallons of milk from the farmer, and he also sold milk from two cans of his own.—The stipendiary said the defendant had made the case worse against him by his own admissions. He had admitted that the man who sold him the milk had told him that he did not pay the price of good milk. Defendant must have known, yet he went and sold the milk to poor people. Cases of that kind must be put a stop to, and defendant would have to pay a penalty of £5 and costs.—The money was paid.

ADULTERATION IN BIRMINGHAM.

THE undermentioned persons were summoned for offences committed under the Food and Drugs Act, at Birmingham last week, and were fined in the sums named:—Charles Young, Upper Gough-street, for selling butter containing 80 per cent. of foreign fat, 60s. and costs, and 20s. and costs for selling adulterated coffee; Midland Equitable Co-operative Society, Farm-street, for exposing for sale unlabelled margarine, 5s. and costs; Henry Cooke, Cregoe-street, for selling coffee adulterated with 35 per cent. of foreign ingredients, 20s. and costs; Emily Smith, Farm-street, 40s. and costs for selling adulterated butter, and 20s. and costs for selling adulterated coffee.

SUGAR.

At Southwark last week, James Bartlett, 30, Willow-street, Bermondsey, and William John Baker, 1, Willow-street, were each summoned by Chief-inspector Thomas, on behalf of the Vestry, for selling yellow crystals of beetroot sugar as Demerara sugar.—The cases were similar to those recently heard at North London, and there was practically no defence.—Mr. Thomas said there was no desire to press for heavy penalties, but only to caution grocers that if they were asked for Demerara they must not supply beet sugar as being the article demanded.—The magistrate concurred with that view, observing that the proportion of aniline dye in the crystals was too minute to be injurious to health, but the public must be protected from imitations. He fined each defendant 10s. and 12. 6d. costs.

MARGARINE.

At North London last week, Charles Burgess, the postmaster at Kingsland High-street, was summoned for selling margarine in a wrapper which was not stamped with the word "margarine" as by law required. An inspector under the Food and Drugs Act, in the employ of the Stoke Newington Vestry, said he went into the shop to make several purchases. He asked for half-a-pound of margarine, and was given this in plain paper. The defendant pleaded guilty, and said it was done without thinking, and not at all with a view to sharp practice. The fact was his two assistants were at tea, and he attempted to do two things at once, viz., serve in the grocery department and listen to the telegraph sounder, which was then transmitting a message. Mr. D'Eyncourt said he could quite accept the defence, but must inflict a penalty, so as to make everybody careful in complying with the law. The defendant said he had never yet had a conviction recorded against him. Mr. D'Eyncourt—I shall only fine you 5s.

TRICKS OF THE GLYCERINE TRADE.

WE know no part of the country where a more intelligent working of the Food and Drugs Acts is carried out than in Birmingham. A few weeks ago that large trader, Mr. T. W. Lipton, was hauled before the bench

for selling sugar adulterated with carbonate of lime. The activity of the Birmingham officials on the question of boracic acid shows their keen regard for the health of Birmingham's inhabitants. The latest fraud they have unearthed is the falsification of glycerine with a drug not considered to possess any medicinal value. This serious contravention of the Food and Drugs Acts is one which will put our readers on their guard, as the same practices, no doubt, are carried on in other places.

Frank Clent, wholesale druggist, 1, Cooksey-road, Small Heath, was summoned, at Birmingham Police-court, on February 19, for selling impure glycerine on February 4. Mr. Hiley prosecuted, and Mr. Baker defended.—Mr. Hiley said this was the first prosecution, so far as he was aware, that had taken place in Birmingham for the adulteration of glycerine. Inspector Jones found a number of small shopkeepers were selling penny bottles of a liquid which was labelled pure glycerine, and he traced the article to Clent and another defendant, against whom proceedings were afterwards taken. Dr. Alfred Hill, as public analyst, had examined the contents of the bottles, and found they contained a mixture of glycerin and syrup of starch, which was devoid of any medicinal value whatever. Witnesses having been called, Mr. Baker pleaded for leniency, not only because his client had entertained no guilty intent, but also because since the issue of the summons his premises had been burnt down, and, being uninsured, he had lost all his savings, amounting to about £200. A fine of £5 and the costs was imposed.—George Turley and Albert Edward Law, 59, Egbaston-street, were summoned for a similar offence. Mr. Turley admitted the facts, but urged that during the last twelve months glycerine had advanced in price from £40 to £80 per ton, and as the public still insisted on having the same size bottle for a penny, they introduced a harmless compound. Mr. Ryland said the defence urged only showed how needful it was for defendants to study the Food and Drugs Act. They would be fined £5 and costs.

SWALLOWING SERPENT EGGS.

A STRANGE case came before Judge Lushington, at Wandsworth County Court, on February 22. The plaintiff was Mrs. Martin, confectioner, of 45, Clapham-park-road, who sought to recover £50 damages from the defendants, Auburn and Heaviside, of St. John-street, Wandsworth, for personal injuries sustained through the defendants' alleged negligence.

The plaintiff purchased from the defendants a number of farthing packets, one of which she sold to a child. The child brought it back, and said her father had tasted the little things in the box in the packet, and they were very nasty. Plaintiff took one out of the box and ate it, thinking it was a sweet. She was taken very ill, and was medically attended for eleven weeks.

Evidence was given to prove that the box contained eggs for producing a Pharaoh's serpent, and an analyst

stated that the pills contained over a grain of sulphocyanide of mercury, a poisonous composition.

For the defence it was urged that there was contributory negligence on the part of the plaintiff in not ascertaining what she was selling to her customer.

His Honour overruled all the objections, and observed that the case was one of great importance to the public. He gave judgment for the plaintiff for the full amount claimed.—*Daily Mail*.

SWANSEA GROCERS AND BORIC ACID.

THE matter of the threatened prosecutions in respect of the use of boric acid as a preservative, says the *Grocer*, came up for consideration at the meeting of the Swansea branch of the Federation of Grocers' Associations last week. Mr. W. Thomas moved the following resolution:—"That this meeting of the Swansea Grocers' Association hears with surprise the proposal of the Glamorganshire County Council to institute prosecutions against traders selling articles of goods containing boric acid, inasmuch as the Select Committee on food adulteration recommend that the use of preservatives should be a subject for a court of reference, and therefore, in the opinion of the members of this Association, it is undesirable for such a subject to be dealt with by separate local bodies, and hereby appeal to the Local Government Board to uphold the report of the Select Committee, and that this resolution be forwarded by the secretary to the proper authorities." He claimed that if boric acid was found to be injurious, then, instead of the grocers and other tradesmen being harassed by local bodies, the Government should order that all food imports of all descriptions should be examined by the customs at the port of entry, with a view to the detection of the adulteration.

The motion was supported by several members, and carried. Copies are to be sent to the clerks of the Glamorgan and Swansea County Councils.

AUSTRALIAN FROZEN BEEF.

SIR HENRY NORMAN, the Agent-General for Queensland, has issued a report of the analyses of Queensland, American, and English beef, on which the *Farmer's Gazette* has these interesting facts. The analyses, which were carried out under the supervision of Dr. S. Rideal, public analyst, of Victoria-street, were specially directed to ascertain whether the hard freezing which Queensland meat undergoes influences its digestibility or value as a food stuff as compared with fresh English beef. Five shins of beef were taken, one from a sample of prime English steer, of Norfolk breed, and freshly killed; one from the shin of an American ox, in good condition, bearing the seal and stamp of the United States Board of Agriculture, and frozen for about three weeks; and three others from Queensland, frozen for over four months. Three examinations were made of these five shins, as to their microscopical character, their relative digestibility, and their value for soup or beef

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ANALYTICAL REPORTS.

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"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average."

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skillful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S., Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London; Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8.

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tea. In the first the results showed that the meat fibres had not been ruptured or altered in any way by the hard freezing process adopted by the Queensland shippers. In the second, the total difference between the three different beefs were so slight that the variations could only be due to differences in the animals themselves, and not to any effect produced upon the meat by the preserving processes. In the third examination the result showed that the beef teas made from the various shins did not differ in their nourishing value nor in their stimulating effect to any appreciable extent. Finally, Dr. Rideal says that the variations in the chemical and physiological properties of the meats are not sufficient to account for the difference in the market values of the various samples.

HOW THE PUBLIC MONEY IS WASTED.

We are informed that the new laboratory which is being built in Clement's Inn for the Somerset House analysts is not so forward as the Board of Works expected it would be, considering the time it has been in hand; it looks now as if it will take another twelve months to complete, although the total contract is only some £23,000. The space, too, which the analysts are occupying in Somerset House is very badly wanted by other departments in the building. The other departments might well have the space for any earthly use the Somerset House analysts are. It is more than evident that the English taxpayer is a patient and long-suffering person.

ADULTERATION IN DERBYSHIRE.

MR. JOHN WHITE, F.I.C., the County Analyst for Derbyshire, reports that during the quarter ending December 19th, 250 samples of food and drugs were submitted for analysis.

The number of samples of butter submitted was very large, viz., 74, and of these six proved to be adulterated: three containing what was in my opinion an excessive proportion of water, and three contained large percentages of fat foreign to butter. The latter were consequently samples of margarine, and in respect of these substantial penalties have been inflicted upon the vendors. It is most satisfactory to be able to record the fact that a fine of £5, together with £1 19s., the amount of the costs, was imposed upon the wholesale dealer of one of these samples; while another of these unscrupulous traders was fined £5, including costs, in connection with a sample submitted during the September quarter. Of the samples returned as containing an excess of water, the respective percentages present were 17, 18·4, and 20·8. Proceedings were taken against the vendors of the two latter samples, and the hearing of the two cases occurred on the same day, with the result that the Bench dismissed the case against the vendor of the sample containing 20·8 per cent. of water. In face of this decision, there was no alternative but to withdraw the summons against the vendor of the article containing the lower percentage. The Bench, in giving their decision, said they came to the conclusion that the water was unavoidably mixed in the process of preparation of the butter, and that therefore they dismissed the case under Section 6, Sub-section 4, of the Sale of Food and Drugs Act.

It will be within your recollection that I have many times expressed the opinion, to which I still adhere, that 16 per cent. is the maximum amount of water which should under any circumstances be present in butter. This opinion is, I believe, with few exceptions, shared by Public Analysts generally, and has lately been officially suggested as a proper standard by the Society of Public Analysts.

The question of fixing a standard for water in butter was a point to which attention was given by the Select Committee of the House of Commons on Food

Products Adulteration, and a large mass of evidence was accumulated by them on the subject. The evidence of the scientific witnesses was, with one exception, in favour of a standard of 16 per cent., and one of the most important opinions expressed was contained in a letter read by Mr. R. Bannister, the Deputy-Principal of the Somerset House Laboratory, sent from Somerset House to the Under-Secretary for Ireland, in reply to enquiries respecting the adulteration of butter by the addition of water. The letter was dated March 23rd, 1893, and the extract was as follows:—"The conditions, however, of butter manufacture are such that a reasonable limit for water in commercial butters may be indicated, taking also into consideration the results of numerous analyses of fairly-made samples. Such a limit might be found at 16 per cent., though in practice an excess over this figure, amounting to fractional parts of one per cent., would not necessarily become the subject of proceedings. I do not suggest 16 in the nature of a standard, as it is obvious that if it could be proved that any water had been added to a made butter, an offence may be held to have been committed, though the total amount did not reach 16 per cent. If in any case, where the amount exceeded 16 per cent., it could be shown that the undue proportion of water arose from want of skill in the manipulation of the butter, and that there had been no intention to defraud, it would, in my opinion, be a question for the magistrates to consider whether the defence was a valid one or not."

A large number of witnesses connected with the Irish butter trade were also examined, and though they were not absolutely unanimous, the bulk of their evidence was to the effect that any standard for water lower than 20 per cent. would press unduly upon the butter makers. It should be borne in mind that this was almost entirely *ex parte* evidence. The Committee eventually reported as follows with regard to Irish salt butter:—"The weight of evidence on this point is clearly to the effect that any standard of water under 20 per cent. would be unfair to the producers of the butter referred to. Having regard to their proposal for the constitution of a Court of Reference, your Committee have not thought it necessary to make any recommendation upon the question of a standard for water in butter. The question is one of considerable importance, and, as the evidence discloses, is not free from difficulty."

This evidence, given before the Committee, was based upon the fact that 4 to 5 per cent. of salt was added to the butter for keeping purposes, and that it then became necessary to have an extra amount of water present to retain the salt in solution. As salt is, however, soluble in its own weight of water, a butter containing 10 to 12 per cent. of water (the normal amount) would, after making the allowance required for the addition of this percentage of salt, only contain 17 per cent. of water at the outside. The samples of butter in question contained respectively 2·1 and 1·2 per cent. of salt, and consequently the contention of the Irish butter traders does not apply to these samples. With the view of obtaining direct evidence I have analysed a sample of Irish butter submitted under the Act, and three samples of butter which had come direct from one of the most celebrated creameries in the South of Ireland. These were kindly supplied to me by Captain Sandys. The results were as follows:—

| Official Sample (Irish). | | Irish Creamery Butter. | |
|--------------------------|------|------------------------|------|
| Water ... | 10·3 | 15·0 | 14·0 |
| Salt ... | 2·4 | 1·75 | 2·0 |

These figures show that it is not impossible for the Irish manufacturers to produce a butter of normal and satisfactory character.

In view of the fact that these butters containing an excess of water are of comparatively recent date, inasmuch as prior to the last five or six years they were

of extremely rare occurrence, it is fair to enquire the reason for their growth. It has also been shown that the average amount of water present in Danish butter, a series of nearly 4,000 samples having been analysed, is 14.4 per cent.; the question may be asked then, Why should Irish butter contain so much more? The answer given is that the Irish article contains so much more salt, added as a preservative, but the Danish material has to be made to keep quite as long, and I pointed out the fallacy in the argument that the extra salt requires a large quantity of water to keep it in solution.

THE ADULTERATION OF BUTTER, AND THE NECESSITY OF STANDARDS.

DR. M. A. ADAMS, in a recent report as public analyst to the Kent County Council, makes the following remarks:—

In most cases the recent adulteration has been comparatively trivial. That this highly satisfactory state of affairs is due to the administration of the Food and Drugs Act is quite clear; and it is equally certain that their operation has been to purify food rather than conscience, for it is manifest the disposition to adulterate remains, though the dread of the consequences keeps it in check. Adulteration of the old-fashioned coarse kind is fast disappearing, and giving way to methods of a truly scientific kind.

I am led to make these observations for the reason that among the samples of butter received this quarter there were five samples, each of which bore evidence that they were mixtures containing foreign fats in small but sufficiently large quantities to make it worth the while of the *producer* (not the retailer) to add. Yet, although I gave a great amount of labour to these cases, I could not feel myself quite at liberty to certify to their adulteration. This position is, in a sense, humiliating. Nevertheless, I am sure, when the matter is understood, I shall be acquitted of blame.

Without going into a full technical discussion, I will try to make my position clear. Judgment of the purity of a butter is based chiefly upon the presence of certain natural constituents of butter fat, that experience proves to be present to a certain indefinite, but average, amount. Large or frequent departures from the average are rare; but, nevertheless, there is a pretty big range between the possible minimum and the possible maximum found in undoubtedly genuine butters. Now, although the absolute minimum is reached only once in some hundreds of samples, and consequently a sample so constituted is in truth a curiosity, still the fact remains that in any one given case of genuine butter, such a one may be *the one* to which a minimum yield naturally attaches. But however true this may be for a single sample, it is equally certain that 7 per cent. of a large number of genuine samples could not be found to exhibit such curious poverty.

Yet in our experience this quarter 7 per cent. were found to be in this case, and the only conclusion I can come to is, that they were not genuine butter, but mixtures of butter and margarine, scientifically produced with a full knowledge of the natural variations of true butter.

There is a special reason at the present time for troubling you with these observations, seeing that it is expected some amendment of the laws relating to adulteration will be passed during the forthcoming session of Parliament. It is greatly to be desired that a remedy may be found for this and analogous difficulties arising out of the variations in natural products—butter, milk, etc.

As a feasible proposal, I suggest the fixing, by a properly constituted authority, of reasonable limits,

which should be so far binding that any departure to the prejudice of the purchaser should be taken as *prima facie* evidence of adulteration, leave being given to the trader to show—in extenuation, but not in excuse—that the fault was due to natural causes.

A provision such as this would at once remedy our present impotence against the vagaries of nature, without placing an innocent trader in a position of undeserved obloquy; and, by directing the producer's attention to, and stimulating his interest in the avoidance of natural defects, it would, in the long run, inevitably tend to raise the quality of natural products.

THE PURE BEER FARGE.

AT the first meeting since the recess of the departmental committee appointed to enquire into the constituents used in the manufacture of beer, the Earl of Pembroke, the chairman, presided, and the other members of the committee present were Dr. James Bell, Sir J. H. Gilbert, Professor Odling, Mr. H. W. Primrose, Mr. Clare Sewell Read, and Mr. W. Blain, secretary.

Mr. H. Le Roy Lewis, chairman of the Hampshire Chamber of Agriculture, said he had read Mr. Quilter's Bill, and he was of opinion that great benefit might accrue to agriculture if some measure of that sort were passed into law, although he did not pledge himself to that Bill. He thought that any recommendation the committee might make to ensure beer being made of malt would benefit the agricultural community. The production and import of hops had decreased, and last year the price was not a satisfactory one. The local brewers in his neighbourhood did not give very much encouragement to English-grown barley. They had a good market for English-grown barley at Burton. One of his great objections to the use of substitutes, looking at it from a purely agricultural view, was that these substitutes gave no brewers' grains—no grains which could be used for feeding cattle.

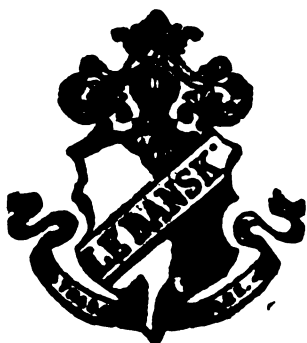
Dr. Bell:—You do not object to the use of malt substitutes in the manufacture of beer?—I have no objection to them whatever, only I wish the consumer to know what article he is consuming. If he wants beer made from malt and hops—and from what I can learn I believe that to be the general wish—he should have the opportunity of knowing that it is made from malt and hops.

Mr. C. Middleton, of North Yorkshire, a large farmer and the representative of several Chambers of Agriculture, said he thought that some measure on the lines of Mr. Quilter's Bill, which would make the brewer specify the materials of which his beer was made, would be an advantage to the agriculturist and the labourer. He was inclined to think that that would make an improvement in the absolute purity of beer.

The Chairman:—Do you consider that certain brewers, say, Messrs. Guinness, Bass and Allsopp, brew entirely from barley malt and hops?—I believe they do; they profess to do so, and I have no reason to doubt what they say. If there was misrepresentation brought home to a brewer what I want is that he should be punished. At present there is no means of punishing him. I want means of getting it. I think that beer should be defined as a drink composed solely of malt and hops.

Mr. Oliver D. Jones, of Bury St. Edmunds, representing the Ixworth Farmers' Club on the Council of the Central and Associated Chambers of Agriculture, was the next witness. He said he had taken an interest in Mr. Quilter's Bill and the composition of beer, and he thought that the article known as beer should be brewed solely from malt and hops.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, MARCH 20TH, 1897.

BUTCHERS, THE GENERAL PUBLIC, AND TUBERCULOSIS IN CATTLE.

THE present iniquitous and dangerous state of the law, or absence of law, on the tuberculosis question has rarely received a more thorough-going exposure than occurred at Portsmouth on March 8.

Timothy Billing, butcher, of 149, Albert-road, Southsea, was summoned, at the instance of the Urban Sanitary Authority, for exposing for sale at 34, St. James's-road, on December 5, a tongue, a heart, two pieces of liver, half a head, and two pieces of suet, all

of which were unfit for food. He was further charged with having in the slaughterhouse at the rear of his premises two sides of beef and three pieces of skirt of beef, which were in preparation for sale, although unfit for food.

Mr. G. H. King prosecuted, and Mr. M. Hyde appeared for the defendant, who pleaded not guilty.

Sanitary Inspector Monkcom said he seized the meat at prisoner's shop and slaughter-house, and it was examined by Dr. McGregor. All the glands, even to the deep-seated glands, were found to be diseased.

In cross-examination, Mr. Hyde read paragraphs from the report of the Royal Commission to the effect that if meat in which tuberculosis was found was properly treated much of it would be fit for food, and he asked Mr. Monkcom if he agreed with those opinions?—Witness: Certainly not; there is great risk in taking any part of tuberculosis meat.

William Henry Turner and Henry Lovelock, other sanitary inspectors, gave corroborative evidence, and Dr. J. McGregor, who was Deputy Medical Officer in December, stated that the meat was diseased. In cross-examination, he said that he did not agree with the scientists in the report of the Commission as to some portions of meat affected with tuberculosis being fit for food.

For the defence, Mr. Hyde said that the animal was originally purchased at the Petersfield market for £12 5s. on November 25th. It was brought to Portsmouth, and when the defendant was in bed with rheumatism the animal was killed. His client had not the slightest suspicion that the animal was diseased. His assistant, and even the man who killed the animal, and who was an experienced butcher, detected no sign of disease. Mr. Hyde further contended that the law only allowed an Urban Sanitary Authority to appoint one inspector of nuisances, and that the Council had no power to legally appoint more than one. Mr. Monkcom was, therefore, not legally appointed with equal powers to Mr. Bell, who was the only inspector recognised by the Local Government Board.—To this Mr. King replied with a quotation from an Interpretation Act of 1880, which stated that in case of any defect in an Act of Parliament, a singular word should include the plural, etc., unless such was plainly contrary to the spirit of the Act. It was not the spirit of the Act that only one inspector should be appointed in a town.

After further argument, Mr. Hyde called witnesses for the defence.—Frederick Restall, of Chalton, deposed to selling the cow at Petersfield Market. It was "as good a cow as ever was seen," he said.—Edward Billing, a brother of the defendant, said he bought the cow, which was fat and apparently healthy. It was killed on December 4. Witness admitted that the animal was a little "grapy." "Grapy" was a butcher's term for tuberculosis. The "grapy" parts being removed, the flesh would be fit for food, and he would not be backward in eating it himself.

On the point of law raised by Mr. Hyde, Col. Owen said the magistrates failed to comprehend how large cities and boroughs could be protected from the danger of consuming meat, poultry, &c., which was unwholesome, or unfit for the food of man, unless a beneficial construction be placed upon Section 189 of the Public Health Act, 1875, under which Inspectors of Nuisances are appointed by Urban Authorities in Urban districts. They must leave the defendant to get this highly interesting and somewhat novel point of law settled by a superior Court, and they offered to grant him a case on application.

The Magistrates convicted on both informations, and inflicted a fine of £6 and 11s. costs in the first case and £5 and 11s. costs in the second.

The first point which must strike the reader of this case is that on every side Mr. Billing is victimised. He pays a fair price for the animal and buys it in a presumably healthy condition. The vendor also

regards it as healthy. It is a pity its origin was not traced further back, as we might have possibly learnt if the beast was one of those subjected to the tuberculin test by some noble breeder and foisted upon dealer and butcher alike by the most noble swindler of honest reputable trademen, for we should much like to see one or two of these most noble, Right Hon., or Honourable Rogues in the dock along with their victims.

There is only one way by which butchers and dealers can protect themselves. Until the law does them the justice of compensation for tuberculosed cattle neither dealer nor butcher should buy any cattle without a *written warranty*. They will then find the most noble rogues, the breeders, as eager for compensation for tuberculosed cattle as they were for foot and mouth disease. The butchers have the power in their own hands, and if such cases as this, where a respectable man is victimised, held up to the ill-repute of his fellow-townsmen, and put to the expense of fines and costs, be not enough to make butchers resolve on concerted action we are at a loss to know what would be thought sufficient outrage. Sanitary authorities themselves ament the scandalous one-sidedness of the law as it stands just as much as tradesmen do, but harsh as it too often is, they must, in the public interest, put it into operation. What all right-thinking people want to see is the punishment fitted on the right persons.

ANOTHER EXPOSURE OF THE MANSION HOUSE COUNCIL HUMBUG.

IN his report, Dr. Joseph Loane M.O.H White-chapel, contributes another to the many exposures of that costly farce *The Mansion House Council on the Dwellings of the Poor*. Dr Loane says.—

“The increased number of notifications of Infectious diseases, as well as the extra work demanded by the Workshops' Acts of Parliament, have strained the energies of your staff. They have, however, thrown themselves into the work with a will that calls for recognition. I am obliged to do them this justice, because people who are not acquainted with their work are apt to undervalue the service which are rendered by them. As an illustration, you may remember how the Mansion House Council on the Dwellings of the Poor, through their local agent, proceeded against the owners of Booth-street-buildings under the Public Health (London) Act, 1891. It was alleged that your officers had not performed their duty. The case was heard upon two occasions by Mr. Cluer, at the Worship-street Police-court. The evidence for the prosecution was heard by me with great astonishment. I was present upon subpoena and gave evidence. The best comment upon the whole case is the summing up of the learned magistrate, which I introduce here: ‘I do not see I have any option but to dismiss this summons. I shall not be entitled to make an order against the owner of these premises, unless they were in such a state as to be injurious to health, and that was in the information set out. With reference to the water-closets, the evidence as to that satisfies me that though not perhaps such as would be seen in King's Palaces, at the same time it is said by Dr. Willoughby that they are such as would be put in by Sanitary Authorities. The principal point made with reference to them was, that they were not fit for children, but if that is so I am afraid I shall have no power, so far as I can see, to order any special class of water-closet to be put into buildings, so that children can use them. It is the duty of parents to see that children use them, if they are in accordance with sanitary regulations. It is the duty of parents to see that the children use the ordinary utensils, and not commit a nuisance. Therefore, I cannot find that these premises are in such a state as to be injurious or

dangerous to health. I thought at first that if it were true that there were no dust-bins at all all this time on these premises, it would be impossible not to come to the conclusion that the owner had been neglecting his duty, but it has now been explained to me that dust-pails were supplied by the Vestry. Mr. Easman says he gave notice to Mr. Reekie. It might be that it was not given so soon as it might have been, but it is quite clear that Mr. Reekie gave orders to replace them. It is quite clear, therefore, that he did his best to replace them, because, had notice been given to the defendant with reference to those, it seems to me he would at once have remedied that defect. The sinks on the ground floor: as far as I can see, the defect in reference to them is not that the water makes the place damp, but at one place it runs over. That is an inconvenience that the owner would remedy of himself, but I cannot say I should be justified in finding that that is injurious or dangerous to health. If it were pointed out to the owner that there was a defect, he would put it right, and you have someone on the premises like Mr. Reekie, to whom you can apply at once. Under the present circumstances he appears to have known nothing before about it, and the injury is unnecessary if the people take care. Now, as to the fenders upstairs, there is conflicting evidence as to that, and considering this, that on the last occasion, the whole of the contention as to that point was—and I was rather surprised at it being put forward by the prosecution—that they were being stuffed up by the tenants, who would empty carrot peelings, tops of vegetables, etc., into these sinks and so fill them over, I was rather surprised at that being taken as something for which the owner was responsible. It was clearly a misuse by the tenants, not by the owner. But, now, to-day, the ground has been shifted from that. Now it is said that, though there were four inches of cement, it is getting shifted away, and the water is running down the wall and making the premises damp. It is clear to my mind that that is not so, because fish heads and other things are thrown into the sinks. These tenants are reckless people. I expect they pay considerably higher rent because of their carelessness. The probability is that if they were not so careless they would have more money for their food. But I am satisfied that the owner has seen to the rainwater pipes when they became defective. He has had them repaired from time to time, and when a shoe is knocked off it probably takes two or three days, or two or three weeks. That is one's experience. When a tile is off you do not run at once to a plumber, and you are not bound at once to remedy it. Other points were put that there were no lights in the staircases or passages. I have no power to put gas in a staircase. I have no power to make a man knock a window through and make a light.’

“The case was accordingly dismissed with 15 guineas costs. In the course of the evidence the prosecutor, who acts as Inspector for the Mansion House Council, admitted that he never called the attention of caretakers to nuisances which he thought to exist.

“I can scarcely believe that the Committee and subscribers to this Council are aware that advertisements constantly appear in the local Press inviting householders to communicate with the Council's officers when they become aware of the existence of nuisances. Were the people advised to forward the information to the Sanitary Authorities which exist for the purpose of dealing with them, and whose machinery is ever ready to speedily treat such cases, much valuable time would be saved.

“In the summer I gave the prosecutor in the above case some post cards requesting him to forward to me any complaints which came under his notice, but up to the present time I have not received a single one.

“As a noteworthy contrast to this method for proving the *raison d'être* for the existence of the Society, I am glad to record my appreciation of the good work carried

out by the Jewish Board of Guardians through their Sanitary Inspector. Conducting his duties upon different lines, this gentleman acts as a fellow-worker with the Board's Officers."

REPORT OF THE OXFORD COUNTY ANALYST.

MR. W. W. FISHER, the county analyst and district agricultural analyst, reported as follows:—

FOOD AND DRUGS.—I have the honour to report that during the quarter no samples have been received for analysis under the Act, either from the inspectors appointed by the County Council, or from private persons. The total number of samples examined during the year has been sixty-two, which is less by forty-five than during 1895, and in relation to the population within the county jurisdiction, amounts to one sample for about two thousand persons. In order to bring the number of articles analysed into more satisfactory relation with the population of the county of Oxford it would be desirable that about double the present number of samples should be obtained for analysis, and I venture, therefore, to suggest that at least thirty articles should be procured every quarter.

WATER.—Nineteen samples of drinking water have been submitted to examination, of which ten were found of good quality. Six effluent waters from town drainage discharging into tributaries of the River Thames have been analysed and found satisfactory; all were free from offensive characters, in respect of odour, suspended matters and general appearance, while the quantities of organic impurities did not exceed the accepted limits for such discharges.

FERTILISERS AND FEEDING STUFFS.—Five samples of linseed cake have been analysed during the quarter; three were genuine linseed; one contained a somewhat large amount (6 to 10 per cent.) of foreign seed; and the other, a Russian sample, was really a mixed cake, as it contained about 25 per cent. of foreign seeds, a species of polygonum and a spargula being the principal impurities.

The Chairman remarked that it would be satisfactory to Mr. Wykeham to see the report of the analyst as to water from the tributaries of the Thames, and that they were satisfactory.

The report was passed, and the Council rose.

INFANT FEEDING: A GOOD SUGGESTION.

DR. J. BLAMEY, M.O.F. East Kerrier Rural District Council, in a recent report, dealing with the question of diarrhoea among children, observed that though the sanitary condition of a locality was probably the chief factor in epidemic diarrhoea, yet from most of the other cases noticed during the year a most important cause and factor existed in the way in which children in arms were fed. The ignorance that existed with regard to the proper feeding of babies was simply lamentable, and it was a well-known fact that through such ignorance thousands of lives were sacrificed. He came across instances where children's lives were lost solely through improper feeding, and many cases of puny, unhealthy, and rickety children, who, having survived the ill-effects of improper feeding whilst they were babies, carried about with them, as the direct results of such feeding, the germs of some constitutional weakness, which, in after years, under slight exciting causes, came into activity and wrecked lives which would, under better circumstances in baby life, have been useful, healthy, and happy ones. Some people would not be taught, and their obstinate ignorance almost amounted to criminal neglect. He had little doubt that if all mothers knew how to properly feed, dress, and bring up their infants, their rate of infantile, and even general mortality, would be considerably diminished. *He advised that a pamphlet containing instruc-*

tions as to how to feed, dress, and rear children should be given by the Registrar, together with the vaccination form, when the parent registered the birth of a child.

BEER MATERIALS.

At the seventh sitting of the Departmental Committee which is sitting in Westminster to inquire into the ingredients used in the manufacture of beer, the Earl of Pembroke, the chairman, presided, and there were also present Dr. James Bell, Sir J. H. Gilbert, Professor Odling, Mr. H. W. Primrose, and Mr. Clare Sewell Read, and Mr. W. Blain, secretary.—Mr. C. F. Paddison, a member of the Lincolnshire Chamber of Agriculture and of the Royal Agricultural Society of England, gave evidence to the effect that in his opinion "beer" should signify "brewed from malt and hops only." He farmed something like 1,000 acres, and grew a good deal of barley, as he found it more remunerative than wheat. He thought there were three principal benefits to accrue from the passing of Mr. Quilter's Bill—first, that benefits would accrue to agriculture if a measure to secure the purity of beer were made law—his definition of "the purity of beer" being that beer should be brewed entirely of barley malt and hops; secondly, he thought benefit would accrue to the agricultural labourer by his obtaining a more strengthening liquor; and thirdly, he considered that the consumer had a right to know of what materials the beer he drank was made. He believed that a good deal of barley could be raised in this country, and that it could be improved in quality so far as brewing purposes were concerned. What he particularly objected to in the brewing of beer now was the use of substitutes, such as sugar, rice, and maize, as it competed with the English grower, and they also found that it had not paid nearly its share of duty.—Mr. G. A. Walker, who farms about 800 acres under the Duke of Portland at Retford, Nottingham, stated that he grows over 100 acres of barley a year, but not at a profit. He had considered the question of pure beer, but he did not entirely agree with Mr. Quilter's Bill. He thought they ought to make it the brewer's interest to brew from barley malt and hops, and he would consequently let the beverage made from barley malt and hops be exempt from duty as far as possible. He would give it a preference. The question of tied houses was one which militated against the agricultural interest. It would be a great deal better for the consumer if there was one free house in every village run in competition with the tied houses. Mr. Quilter's Bill could not, he believed, do any harm, and he was afraid it would not do much good.—Mr. John Herman Biddell, a land agent and valuer, of Playford, Ipswich, and president of the East Suffolk Chamber of Agriculture, was the third and last witness examined. Looking at the matter from the agricultural view—he had farmed for 40 years—he strongly objected to the use of any rivals to barley in beer. He thought that if the labourer—the consumer in the country—knew what beer was made from, he would very much prefer the malt and hops beer, for beer made from malt and hops was more nourishing than that made from substitutes. The making of Mr. Quilter's Bill effective would rest, in his opinion, with Excise officers, who might make it so.—The Committee again adjourned.

CREAM OF TARTAR PLUS 7·11 PER CENT. OF SULPHATE OF POTASSIUM.

A case, recently reported in *The Down Recorder*, is a sinister comment on the purity of drugs in Ireland, and the mental qualifications of some Irish magistrates:—

Margaret Walton, Ballintogher, was summoned by Sergeant Henry, inspector of Food and Drugs, for that on January 29 she did sell to the prejudice of the purchaser a quantity of cream of tartar which was not of

the nature, substance, and quality of the article demanded, but was adulterated with 7.11 per cent. of its weight of sulphate of potassium. Mr. M'Cartan, solicitor, appeared on behalf of Messrs. Clarke, Belfast, the wholesale house from which the article had been purchased, in the first instance, by the defendant. The certificate of Dr. Cameron, public analyst, having been handed in, Sergeant Henry deposed to purchasing on the date in question a $\frac{1}{2}$ lb. of cream of tartar, a sample of which he forwarded to the analyst, whose certificate had just been produced. In cross-examination by Mr. M'Cartan, complainant said he had no book of instructions as to the amount of sulphate of potassium allowable in cream of tartar, and he relied solely on the certificate of the analyst. Mr. M'Cartan said he was instructed by his clients that if there was a conviction in the case it would dislocate their whole trade in this article in the North of Ireland. Several prosecutions had been brought against traders in the country, and it had been held by the magistrates that a certain percentage of sulphate of potassium in cream of tartar was not an offence under the section. The Messrs. Clarke had purchased this commodity in France. In the invoice it was marked as of the first quality, and evidence would be given to show that it had not been tampered with either by the Messrs. Clarke or the retailer. George Colley and Charles Henry Dolling were then examined to show that the cream of tartar had been disposed of in the same condition as it had been received from the manufacturer. Henry Templeton, analyst, gave technical evidence to the effect that the quantity of sulphate of potassium found in the cream of tartar purchased from defendant could not by any means be regarded as an adulterant, and it was absurd to expect that the article should be perfectly pure, as, if that was insisted upon, it would prevent the article being purchased from the French manufacturers. After a short retirement, the chairman announced that, by a majority of four to three the Bench had decided to dismiss the case without prejudice.

We think we have heard arguments like unto this of Mr. Henry Templeton, analyst, before. It would dislocate the Dutch, German, etc., trade in butter mixtures if a certain percentage of butter was not allowed in margarine, and it plays havoc with a host of public plunderers that we don't allow a certain percentage of margarine to be mixed with pure butter. No wonder Ireland is a distressful country, when numskulls sit on a bench who regard such arguments with anything but contempt.

SPIRITS.

GEORGE THOMPSON, of the Sun Inn, Tuxford, was charged at Retford, on March 13, with selling whiskey 2.5 below the strength required by the Act.—The defendant alleged that Tuxford water was very hard, and did not assimilate with the spirits. He tested the whiskey after Inspector Garforth left, and found it 23.5 below proof. The same day at 6 p.m. he tested it again with Sykes' hydrometer, and found it 19.3, two days after it was 17.—The Bench said publicans were not compelled to reduce spirits so near the line of strength required, and if they attempted it they did so at their own risk.—A fine of £2 was inflicted.

At Melton Petty Sessions, on March 9, Thomas Etches, landlord of the Golden Fleece, Melton, was charged by Supt. Bott with selling brandy adulterated 18½ per cent. below the 25 per cent. allowed.—Prosecutor said he bought, through an agent, a pint of brandy, and divided it into three parts—one to defendant, one for analysis, and retained one himself—the result of the analysis showing the above adulteration.—Defendant pleaded guilty, but stated that it arose from an error, he being in the habit of bringing the liquor down to required proof when he received it. As he had some time before to supply a ball,

he had in that case asked Messrs. Langton and Sons to let him have it broken down to proof for that purpose, instead of having to do it himself. The bottle containing some of this brandy was put in among his stock unlabelled. He brought it out one day and treated in the usual manner to make it legally right, but forgot it had previously been done.—Mr. W. Munton, agent for Messrs. Langton and Sons, produced an order book to state the brandy supplied on the occasion referred to was sent in down to proof.—The Bench fined the defendant £3, and costs, 10s.

CHARLES HOUGHTON, landlord of the Bishop Blaze, Melton, was charged by Supt. Bott with selling brandy 6 per cent. under proof.—Similar evidence was given by Supt. Bott as in the previous case.—Defendant said all the brandy he had was old stock taken off the former tenant, and he did not know but what it was all right.—He was ordered to fetch his inventory for the Bench to see, and on examination and some consideration the Bench said they would be lenient in the case, of which there was a doubt, and inflict a fine of £2 including costs.

WINES FOR INVALIDS.

THERE is so much "doctoring" of wine, dosing of it with preservatives, etc., that any attempt to secure absolute purity in wines—especially for invalids—deserves recognition.

The Société Viticole Française, Ltd. (The French Wine Growers' Association), 38, Broad-street House, New Broad-street, London, E.C., has been established to supply absolutely pure wines. We have sampled some of the Burgundy and Bordeaux wines, and if good quality and freedom from any adulteration be sustained, the company should soon gain a good trade in this country.

"LIME JUICE AND GLYCERINE."

At Brentford, on March 13, Mr. William Leighton, a chemist, of Hanwell, was summoned for selling a preparation of "glycerine and lime juice" which was not of the nature, substance, and quality demanded.—Mr. W. A. Davies defended.—Walter Tyler, the inspector under the Food and Drugs Act for the Western Division of Middlesex, said that he purchased from the defendant a preparation of glycerine and lime juice, which, upon analysis, proved to contain no glycerine. He added that he did not wish to prejudice the defendant, but he was bound to say that this was a very common fraud on the public.—Mr. Davies said his case was that the preparation did contain glycerine.—Mr. Edward Bevan, the public analyst for the county of Middlesex, said that there was absolutely no glycerine in the sample submitted to him.—Cross-examined by Mr. Davies, the witness said that the sample contained some vegetable oil and an alkali, the substance necessary to form glycerine. In this the process known as saporification had not taken place, and there was therefore no glycerine in the sample.—Mr. Davies: Have you examined many samples of this glycerine and lime-juice hair-wash?—Yes, very many.—Mr. Davies: Have you ever found any glycerine in them?—Never. (Laughter.)—Mr. Davies submitted that as the defendant had put in the preparation a vegetable oil and an alkali, the substances which produced glycerine, the summons must be dismissed.—The Chairman: No, no, Mr. Davies; that won't do. You profess to sell glycerine, not the substances which may under certain circumstances produce it. There must be a conviction, and, as this is the first case of its kind, I hope it will be a warning to other people. The best punishment for the defendant would be to hand him over to the tender mercies of the ladies to whom he has sold this hair-wash. (Laughter.) As it is, we fine the defendant 20s. and costs.

EXCESS WATER IN GLYCERINE.

LEWIS PROUDLOCK, general dealer, of Wingate, was summoned recently at the Castle Eden Petty Sessions, by Mr. B. Scott Elder, chief inspector under the Food and Drugs Act, with selling glycerine containing 14 per cent. of added water, contrary to the Act of Parliament.—Mr. Elder opened the case, and explained to the Bench that defendant had in his shop small bottles of glycerine exposed for sale at 1d. per bottle. They were marked "Re-distilled." Such glycerine could not possibly contain water. A few sample bottles were purchased by Mr. Wilson, assistant inspector, and were subsequently analysed by Mr. Stock, County Analyst, of Darlington, with the above result. Mr. Elder handed up six bottles to the Bench for inspection.—George Wilson, assistant inspector to Mr. Elder, then gave evidence proving the purchase, and Mr. Stock proved the analysis.—Mr. Elder said he expected defendant to say he got the drug from the wholesale people, and he (Mr. Elder) would have liked to have seen the wholesale people represented, as they were the real offenders.—Major Burdon asked if there was no way of getting at the wholesale people?—Mr. Elder replied that unless the wholesale dealers gave a warranty with their goods they could not be proceeded against, notice on the label "Re-distilled" did not constitute a warranty.—Defendant pleaded that he bought the glycerine from a wholesale house, and understood it to be pure.—A fine of 20s. and costs was imposed.

JOSEPH LUXMORE, shopkeeper, of Wingate, was also charged with selling glycerine in penny bottles, which, on being analysed, was found to contain 13 per cent. of water in excess. Mr. Elder again called Mr. Wilson and Mr. Stock. In this case there was nothing on the labels but the one word "glycerine."

Mr. Horner, of Stockton, who appeared to defend, asked Mr. Stock if there was no other standard of purity for glycerine except that of the British Pharmacopœia?—Mr. Stock replied in the negative.—Mr. Horner said that there was, and that the glycerine sold by defendant was pure, but of a commercial standard. Mr. Horner began to read from an encyclopædia another definition of glycerine.

Mr. Elder: Is that a standard work; you must not give us the authority of a dictionary.

Mr. Horner: It is an encyclopædia, and I only want to show that there are more kinds of glycerine than that recognised by the British Pharmacopœia.

Mr. Horner cross-examined Mr. Stock with the object of showing that the water might be retained in the glycerine in the process of distillation.

Mr. Stock said that pure glycerine contained no water whatever.

Ultimately Mr. Horner asked for adjournment, so as to be able to bring other chemists to give evidence against that adduced by the prosecution.—An adjournment for 14 days was granted.

At the adjourned hearing, on March 13, Joseph Luxmore was fined £3 and £2 costs.

A correspondent calls our attention to a fact which shows how alert the Durham County officials are. As far back as September, 1896, glucose was detected in commercial glycerine in Durham.

MARGARINE.

At North London Police-court, on March 10, Mrs. Weiss, a small shopkeeper, of Ball's Pond-road, was summoned by the Islington Vestry for selling margarine which was not in a printed wrapper declaring that it was margarine. Mr. A. M. Bramall, solicitor to the Vestry, called Sanitary-Inspector Fortune, who proved asking for margarine, and getting it in a plain paper. The defendant pleaded guilty, and said she did it inadvertently. She had spent all the money she had in this business, and hoped she would not be fined. Mr.

Bramall said that, at the suggestion of Mr. Bros, the Islington Vestry had caused to be distributed handbills cautioning small shopkeepers specially as to the legal methods of conducting their businesses. The inspector could not say if one of these notices had been served upon the defendant. He knew she had taken the shop since these notices were sent round. Mr. Bramall said he could not say if this handbill was one of the assets of the out-going tenant. At any rate, he did not press for a heavy penalty, because the defendant was a poor woman. Mr. D'Eyncourt inflicted a penalty of 6d. only, and 2s. costs, at the same time telling Mr. Bramall that he had very properly informed the Court as to the doubt whether the defendant had seen the printed caution sent out by the Vestry.

CLERKENWELL VESTRY AND THE STANDARD QUALITY OF MILK.

THE Public Analyst presented a report on a recent prosecution of a milk dealer for selling poor milk. He (the analyst) found the milk 10 per cent. deficient in fat according to the standard laid down by the Society of Public Analysts: but the defendant in the case went to the Somerset House Laboratory and got his part of the sample analysed, with the result that the latter authority found that the milk was practically normal, and that there was no conclusive evidence that a portion of the natural fat had been removed. The magistrate who heard the case accepted the Somerset House certificate, and gave costs against the vestry. The local analyst consequently asked that the Government be asked to determine the standard upon which prosecution may be based.

Mr. Putterill (chairman of the Public Health Committee) moved that the suggestion of the public analyst be adopted. The present, he said, was a most opportune moment, because there was now a Bill before the House of Commons dealing with the Food and Drugs Act. The milk supply to the people, more especially the poor, was an important matter; and the vestry might reasonably ask the member for the borough (the Hon. Massey-Mainwaring, M.P.) to get Parliament to lay down a standard upon which public analysts might base their certificates. If Clerkenwell could be the pioneer in such a necessary reform it would be a good thing.

Mr. J. Gibson seconded, and it was adopted.

A QUEER BUTTER CASE.

IN December of last year a warrant was granted for the arrest of James Anderson, grocer, Armadale, on account of his not appearing at the Linlithgow Sheriff Court there to answer a complaint under the Food and Drugs Act for having sold salt butter alleged to be adulterated. The case was before the Court yesterday under an entirely new phase, and a joint minute was lodged for the parties, under which Mr. Frew admitted he was in error, and undertook to pay the whole of the expenses. The minute went on to explain that the analyst, Dr. Readman, had fallen into error in a similar case, and it was possible he might have erred in his analysis of Mr. Anderson's butter. For Mr. Anderson, the butter had been analysed by Dr. Ivison Macadam, analyst, Edinburgh, and Dr. Falconer King, analyst for the city of Edinburgh, both of whose analyses showed the butter to be pure.

SAFFRON.

At Clerkenwell, on March 11, George Imeson, of 172, Caledonian-road, was summoned by the Islington Vestry, for selling, on January 30, saffron containing

36 per cent. of barium sulphate. Mr. Bramall prosecuted, and Mr. Moore defended. Mr. Bramall said the summons was taken out under the Food and Drugs Act. Saffron was made from crocuses, a vegetable product, and consequently light. Barium sulphate was a mineral product, and heavy. It was expensive, and cost about 6os. per lb. Sixpennyworth was purchased from the defendant's shop, and upon analysis by Dr. Teed, it was found to contain 36 per cent. of barium sulphate. Mr. Moore, for the defence, said his client purchased one ounce of the saffron from a firm of wholesale chemists. His client was not a chemist but a tobacconist, who sold also patent medicines. Mr. Bros said he would be satisfied if the defendant would pay 3rs. 6d. costs.

ST. GEORGE'S SANITARY INSPECTOR CENSURED.

THE Public Health Committee recently recommended that Mr. Anscombe, one of the vestry's sanitary inspectors, be censured for misconduct.

This recommendation having been adopted, Mr. Anscombe was called before the vestry.

The chairman read the minutes of the committee, who pointed out that conflict of action had arisen between Mr. Anscombe and Miss Elliott (the recently appointed sanitary inspector), by which a sanitary order was stultified by Mr. Anscombe advising an owner not to carry out works ordered by Miss Elliott. "I am directed to censure you," said the chairman, addressing Mr. Anscombe, "firstly, for interfering with their order when it was served; and, secondly, for the unsatisfactory explanation of your conduct when before the committee. You have been in the service of this vestry for a considerable number of years, and it is a source of regret to us that such a report should have been received. I am desired to express the hope that there may be no further report of a similar character brought before the committee."

Mr. Anscombe then withdrew.

THE CONDEMNED MEAT QUESTION AT PAISLEY.

MR. W. W. KELSO, Chief Sanitary Inspector, Paisley, in his annual report for 1896, has the following interesting account of how this difficult question is dealt with at Paisley:—

"Ninety-four carcasses of beef, 10 of pork, and 10 of mutton were seized in the slaughter-house and destroyed, as being unfit for human food. The report of Mr. M'Luskie, superintendent of the slaughter-house, bears that 4,390 cattle were killed in the slaughter-house, 16,718 sheep and lambs, and 1,010 pigs, which shows that the percentage condemned is not very large. While the mode of inspection has not been in any way changed, this is not believed to account for the greater amount of meat seized. It is rather believed to be due to a system of insurance having been inaugurated in connection with the local cattle mart to help to cover the loss of carcasses of cattle condemned when killed. The buyer and seller pay one shilling each per animal, and insurance is paid at the rate of three-fourths of the price of all animals purchased at £6 and upwards for the purpose of slaughter, if condemned, so that the buyer is relieved of risk to that extent. It may be mentioned that 66 carcasses, or 70 per cent. of the beef condemned, was affected with tuberculosis; and 3 carcasses, or 30 per cent., of the pork condemned was also affected with tuberculosis. Further, the tuberculosed pigs belonged to cowfeeders. Of course, it is not known whether they had been fed with tuberculous milk, but the circumstance is worth noting."

SAUSAGES.

AT Bootle on March 12, John Bohn, a pork butcher carrying on business in Derby-road, Bootle, was sum-

moned for having on his premises a quantity of unsound meat. Mr. J. H. Farmer (Town Clerk), who prosecuted, called Inspector M'Culloch, who stated that on the 27th ult. he visited the defendant's shop, and found 80lbs. of sausages and other meat which smelled badly, and was quite unfit for human food. He communicated with Chief Inspector Daley, who seized the meat, and, having obtained a magistrate's order, had it destroyed. Witness asked the defendant's assistant what was intended to be done with the meat, and he replied that it was going to be made into spiceballs (laughter).—Mr. Daley and Dr. Sprakeling gave evidence as to the unsound state of the meat, both being of the opinion that it was not at all fit for human consumption.—The defendant said the meat was not intended for sale. He put it in the cellar because it was bad.—The bench considered the case a serious one, and fined the defendant £5 and costs, or one month's imprisonment.

MEAT.

AT Plymouth, on March 11, Thomas Cheesworth, South Petherwin, Launceston, was summoned under the Public Health Act, at the instance of the medical officer of health, for having on February 11 exposed two quarters of beef for sale when it was unsound and unfit for human food. Mr. Eric Ward prosecuted, and Mr. Trehane appeared for defendant.—Mr. Lewis, employed at the Caxton Mews, Old Town-street, Plymouth, said defendant arrived there at 7.30 p.m. on February 10 with a covered cart containing a quantity of meat. At his request, witness asked two butchers to come and examine the beef, but they did not do so.—William Roberts, licensed porter at the wholesale meat market, carried the beef, of which there were four quarters, from defendant's cart to a manager at the mews. As he was carrying it he could not help remarking that the beef would have to "pass the doctor." In accordance with instructions witness hung two quarters in the meat market next morning.—William Durham, butcher and meat salesman, said he had his attention called by Roberts to the beef. Finding it in a condition unfit for food, he declined to have anything to do with it. The animal must have been suffering from a wasting disease when killed.—Frederick Adams, chief meat inspector, said the beef, which was hanging up in the usual way in the wholesale market, was pale, flabby, sodden, and wet, and in an emaciated condition. On defendant bringing the other quarters of the animal into the market, witness asked him where the lungs were, and defendant said they were no good, and he had given them to the dogs. The meat was very bad, and not fit for food. He had not seen a worse sample of beef during the past six years.—Dr. Williams, medical officer, said the animal had been emaciated and entirely unfit for human food. Defendant was given every opportunity to have the meat examined on his own behalf.—Mr. Trehane, on behalf of Cheesworth, pleaded that a fine only might be imposed, and produced a number of testimonials as to defendant's previous good character.—The Bench characterised the case as of a very bad character, without any extenuating circumstances, and imposed a fine of £15 and costs, or six week's imprisonment.

AT the Guildhall, London, on March 11, George Palmer, of Chittenden Farm, Hever, Kent, was summoned before Mr. Alderman Halse, for being the owner of certain diseased beef which was deposited in the Central Meat Market, for the purpose of sale. Mr. T. G. Vickery prosecuted on behalf of the Commissioners of Sewers, and Mr. Bernard Abrahams defended. Chief Inspector Terrett, of the Meat Market, said he saw this beef on the morning it was seized. It was in a wet state, and evidently belonged to the carcass of an animal that had suffered from some wasting disease. For the defendant it was pleaded that he did not know

the meat was bad. The Alderman imposed a penalty of £50, and £4 4s. costs, with 21 days' hard labour in default of payment.

MILK SHOPS AND INFECTIOUS DISEASE.

At Thames, on March 12, Lazarus Berkowitz, of New-road, Whitechapel, appeared to answer three summonses taken out at the instance of the London County Council for breaches of the Milk Shops Regulations Act.—In consequence of Mr. Cook, sanitary inspector to the Whitechapel Board of Works, receiving two medical certificates, he visited the defendant's premises on January 29, and asked Berkowitz if he had any illness on the premises. The defendant replied, "No." On the inspector proceeding to a room over the shop, he saw two children in bed, as notified. The children did not belong to the defendant, who was told by the inspector he must not sell any milk, and must notify the County Council. The inspector afterwards ascertained that the children had been removed from 107, New-road by the doctor's orders.—Mr. H. J. H. Tuck, inspector to the County Council, proved that the defendant was a registered purveyor of milk.—The defence was that the father of the children was told that the latter were afflicted with some disease, and must be isolated in some place where there were no children. He (the father) then smuggled them to where his son-in-law was living on the defendant's premises. Until January 29, Berkowitz had no knowledge the children were there. It was also stated that the defendant had an imperfect knowledge of English, and was in a small way of business.—Mr. Dickinson said he could not accept that defence, and was afraid the defendant was not quite the innocent man he had been represented. It was a very bad case, and defendant would be fined £9 and £1 1s. costs.

BUTTER AND MARGARINE PROSECUTIONS AT BOLTON.

At the Bolton County Police Court, on March 8, Piers Naylor, Westhoughton, was charged with selling adulterated butter on February 15. Mr. W. J. Parkinson, Inspector to the Royal Lancashire Agricultural Society and the Lancashire County Council, stated that he visited the defendant's shop and bought some butter at 11d. per lb. When told that it was for analysis the person in charge said it was a "fine mixture." The analysis showed that it contained 10½ per cent. of water and upwards of 80 per cent. of fats other than butter. A fine of 50s. was imposed.—Mrs. Eliza Wood, widow, Deane, was charged with a similar offence and dealt with in a like manner. This specimen of butter contained 13 per cent. of water and 65 per cent. of foreign fats. It was stated to be only worth 4d. per lb. and sold at a 1s.—Alice Barlow, Darcy Lever, was charged with selling adulterated butter. The article contained 11 per cent. of water and 60 per cent. of foreign fats. The Magistrates imposed a fine of 50s. and costs.—In a charge against Mary Hardman, of Darcy Lever, the inspector showed that the adulteration was to the extent of 50 per cent. of foreign fats. A fine of 40s. and costs. was imposed.—Robert Holcroft, manager to a Westhoughton Co-operative Society, was summoned for not having margarine properly labelled on the 15th ult. Mr. Hodgkinson appeared for the defendant, and pleaded guilty to a technical offence. They had it labelled, but not in conformity with the Act. A fine of 40s. and costs was imposed.—Ralph Howarth, Westhoughton, was charged with a similar offence. There were two dishes properly marked, but the third one had not the requisite label on it. Defendant was fined 50s. and costs.—For a similar offence Edward Cook, of Aspull, was fined 40s. and costs.—Rhoda Seddon, Westhoughton, was charged with selling margarine in a paper not properly marked, and also with not having margarine properly labelled. A fine of 40s. and costs was imposed in one case, and the defendant was ordered to pay the costs in the other.

MUSTARD.

At Ashford, William Cheesman, grocer, Chilham, was summoned for selling adulterated mustard on January 29.—Mr. B. C. Drake defended, and stated that his client could not be present as he had broken his collarbone.—P.C. Newman purchased a quarter of a pound of mustard at defendant's shop for 4d., and Dr. Adams, the County Analyst, certified that it contained 80 parts of mustard and 20 parts of wheat flour and turmeric. Two other articles purchased at the same time—coffee and ground rice—were genuine.—For the defence Mr. Drake stated that for table use mustard was always mixed by Messrs. Colman with wheat flour and turmeric, not to increase it in weight and bulk, but in order to make it fit for use and an article of commerce.—The Bench dismissed the case.

THIS WILL BE PUT DOWN TO THE LAMPS.

THE scandal of County Council Officials attending inquests on victims of the murderous 73 Flash-point American Oils, and laying the blame on cheap lamps, instead of the refuse oils, has begun again, and now that London's County Council has a scientific man at its head, we trust to see an end of it. It seems almost as if the Council's Inspectors are more in the pay of the American Oil Gang than the Council by the way they work to advance the Oil Gang's schemes. The following will, as usual, we suppose, be put down to cheap lamps:—

An outbreak of fire, resulting in serious injuries to two persons, occurred in Pitt-street, Bethnal Green-road, on March 15. By some means a lighted paraffin lamp standing on a table in the front room on the ground floor was overturned, setting the furniture on fire and severely burning Alfred William Choules (42) and Sarah Choules (33), who were conveyed to a hospital.

Anthony J. Mundella, M.P., please note, and avoid engineering.

150 SAMPLE ADVERTISEMENTS FOR DRUGGISTS.

No more striking illustration of the difference in the methods of pushing business in England and the United States could be instanced than this booklet produced by the Pharmaceutical Era, New York, at 50 cents. It comprises 150 ingenious pictorial devices for attracting public attention. To English chemists who advertise we recommend this little book. The hints it gives, its droll ideas and quaint drawings would do much to give a much-needed enlivening to our newspapers, and, we believe, bring business to the counter of the innovators.

PURE CHOCOLATE CROQUETTES.

RECENT prosecutions for adulterated confectionery have no doubt served a useful purpose in making many dealers more cautious about the articles they vend. Nothing can more seriously damage a confectioner than an adulteration prosecution. He may have only one spurious article in his shop, but that may happen to be the very article the inspector takes for analysis. Suppose, for example, Vanilla chocolate be asked for, and chocolate flavoured with the chemical substitute for Vanilla—Vanilline—be supplied, a prosecution would no doubt result, and confectioners have recently had serious cases quite as unexpected. We have never come across any direct evidence that Vanilline is objectionable, but it is not "of the nature, substance, and quality of the article demanded," and, therefore, a conviction would be certain. In examining this class of confectionery there are found articles prepared with substitutes, and traders would do well to be on their guard. Goods, however, prepared with finest cocoa, sugar, and pure Vanilla can be procured from the

Kurruwa Association, 2, Idol-lane, London, E.C. The flavour is delicious, and the get-up attractive. This firm has also placed on the market a cocoa of very fine quality.

CORRESPONDENCE.

DAIRYMEN AND THE MILK QUESTION.

To the Editor of FOOD AND SANITATION.

SIR,—I will thank you very much if you could find room for the enclosed copy of letter we are now sending to our Members of Parliament and others, showing the absolute necessity for a change in the law to meet the needs of dairymen. Local authorities must also be in favour of this change as they would then have full control over the milk supply; they would not then have to prosecute innocent men because they could not reach the adulterator, then it is the duty of such Local Boards to make representation to the Local Government Board that a change in the law may be made.—Yours, etc.,

ROBERT EDGE.

Manchester, March 9, 1897.

MANCHESTER, SALFORD, AND SURROUNDING TOWNSHIPS MILK DEALERS' PROTECTION SOCIETY.

SIR,—The great importance of the subject to dairymen and the public supply of genuine pure milk is our best excuse for troubling you. We have been requested by our committee, to call your attention to a very serious flaw in the Sale of Food and Drugs Act Amendment Act of 1879. This Act is confined in its scope to the limit of the Public Analyst, who is the analyst of the district only, and in practice, through this restriction, there are occasions when this law does not work smoothly. In fact, it fails to render that assistance in time of trouble to dairymen, that the promoters of this Act were in hopes it would do. Under these circumstances, and while there is an opportunity of a change in the law being made, we are very anxious to procure the assistance and sympathy of Members of Parliament to make such changes in the new Adulteration Act, that the dairyman may be able to work his business in peace and safety like other tradesmen. Our long experience of the working of this amended law enables us to speak with confidence of its good work. When it can be put into force, it works surely, impartially, and without friction.

What we want is a clause something like the following, or one to accomplish the same object: "Inspector, or other duly qualified person, under the direction and at the cost of the local authority appointing such inspector or officer, shall have authority to procure at any railway station or other place of delivery any sample of any milk in course of delivery to the purchaser, whether in or out of the district for which he is appointed, and shall submit the same to be analysed, and the same shall be analysed by the analyst to the local authority notwithstanding he is not the analyst of the district."

The present law is faultless where a dairyman works in the same district in which he receives his milk, but in large towns the dairyman is compelled to go into many districts each day. It is here where our difficulties begin. If a dairyman receives milk in Manchester and sells it in Salford, the Salford authorities cannot follow this same milk up to the place of delivery for the purpose of taking a sample, or if the authorities where the milk is delivered take samples it is never satisfactory. The second authorities never seem to take the same interest in a case as they do when they have it from the first. If this clause were made law, each milk case would be in the hands of the authority where the samples were taken, and all the samples would be analysed by one analyst and by one method,

and long experience has taught us that it is far more satisfactory and better every way when this can be done. Under this clause the inspector would be able to go straight to the place of delivery to follow up any sample of adulterated milk. This is the simple change we desire to be made in the law. It may not seem much, but to dairymen it is very important, for innocent men's reputations depend upon it.

The dairyman's position under the Sale of Food and Drugs Act is the most dangerous of any other trades responsible to the Act. He is solely dependent upon the farmer for his milk supply, and when he receives it he cannot tell whether it is according to contract or not, nor is it possible to get this information before he is compelled to sell it. If he sells the inspector adulterated milk he has certainly committed an offence, and the only thing he could say in self-defence is, that he bought the milk in question as the same in nature, substance, and quality as that demanded of him.

He might be able to tell us much more, but this would not be proof. A written warranty will protect him from a milk prosecution, but this is not proof that he is innocent. We want to prove to the satisfaction of all parties concerned if we have sold adulterated milk we had no intention of fraud, and it is only possible to do this by proving we have been served with adulterated milk. We cannot do this without a change in the law. Then we respectfully ask you to render all the assistance you can in making a change in the Sale of Food and Drugs Act, that dairymen may be able to work their business with some degree of confidence. If dairymen are to have any chance of showing they are honest men, the following up of adulterated milk by the inspector to the place of delivery becomes an absolute necessity, and in desiring this change of the law we shirk no responsibility. Surely this is only a fair concession to make to the dairymen, considering the hard conditions under which he is compelled to work his business. In taking samples of the farmer's milk we do him no wrong. If he has sent his milk according to contract he has nothing to fear; but if the farmer's milk is found adulterated it is strong presumptive proof the former samples were sent adulterated, but, if otherwise, then the dairyman has failed to prove his innocence.

The obstacles in the way of making a change in the law are simple and technical, the analyst being the analyst of the district only, as, for instance, the Manchester authorities followed up adulterated milk outside their jurisdiction, and took samples of milk at railway stations and other places, and it worked well for about seven years, the inspector taking samples as if in his own district, *injuring no one and interfering with no one*, but the good work was stopped because the City analyst could not analyse the samples taken outside the Manchester district, he being the analyst of the district only. If dairymen are to have reasonable protection from unjust prosecution, the authorities must have full power over the milk supplied in their district, from its delivery to its sale.—Yours respectfully,

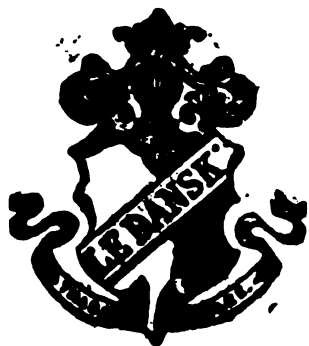
ROBERT EDGE, Chairman.

WILLIAM OWEN, Secretary.

27, Bradshaw-street, Gt. Cheetham-street,
Higher Broughton.

SIR HUGH GILZEAN-REID, F.J.I., D.L., L.L.D., Ex-President of the Institute of Journalists, and Mr. Albert F. Calvert, of Westralian fame, paid a visit of inspection to the establishment of Messrs. Mather and Crowther, Ltd., the well-known Advertising Agents, of 10, 11, and 12, New Bridge-street, London, E.C., on March 10. After remaining for a considerable time, they expressed themselves highly satisfied and surprised at the extent of the premises, and the number of departments and staff, and complimented the partners on their success.

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Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

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LONDON: SATURDAY, MARCH 27, 1897.

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Food and Sanitation.

SATURDAY, MARCH 27TH, 1897.

POISONING BY TINNED FOOD.

THE letter from Mr. C. Wood, which we publish in another column, is a striking proof of the need there exists for a real inspection of canned foods, and it bears out our frequently-expressed contention that, in the real interests of the canners themselves, as well as for the protection of the public from poisoning, the present condition of things cannot be allowed to exist. Apart from the filthy practices Mr. Wood and the *Globe* call timely attention to, there are other grave dangers:—

WHAT CAUSES TINNED FOOD POISONING.

The alarming number of these cases, occurring as

they do so frequently in all parts of the country, renders it necessary that some consideration should be given to the causes of the poisonings. Sedgwick first proved, in the *Archives de Pharmacie*, 1888, the poisonous effects of tin upon food in the case of some pears that had been prepared in a tinned saucepan. This was followed by experiments by Professor Beckurts, who, in 1889, at the Congress of German physicians at Heidelberg, called attention to the presence of tin in canned goods, and to the formation of tin sulphide by the action of the albuminous matters upon tin. Nehring, at the same Congress, gave the amount of tin found in preserved asparagus as 0·186, 0·315, and 0·227 per cent. The congress discussed the question and recommended by vote that tin plate should be forbidden for use in vessels in which articles of food were to be preserved. At Amsterdam Hygienic Congress, in September, 1890, Captain Winkel reported the case of 270 soldiers who had fallen ill after eating lettuce and meat—both preserved in tins; the amount of tin present being, according to Professor Wefers Bettink, Utrecht, from 19 to 72 milligrammes per kilo. We must here call attention to one extraordinary point:—*In none of the poisonings recorded in England have meats packed by English firms been found at fault; they have invariably been those put up by American and other foreign packers.*

FREE POISONING BY AMERICAN PACKERS.

An American can of fruit was found tinned with an alloy that contained 0·55 per cent. of lead, and the solder under the lid showed 50·84 per cent. of lead. Corned beef similarly tested showed 50·06 per cent. of lead under the tin. These dangers from the tin itself, from the lead and soldering, from careless tinning, and the fact once more brought to light in the experiments of Dr. Stevenson, "*that he extracted from the contents of the stomach of the unfortunate Lieutenant Huddleston, poisoned by sardines, a substance which, when injected into a rat, killed the animal; but which was different in its properties from any known vegetable or mineral poison.*" show the grave need for enquiry into the causes that develop poisons so deadly, and of which, scientifically, there is absolutely nothing definitely known. The leading American packers of these articles were, in consequence of the frequency of cases of poisoning and the recommendations of the Heidelberg and other Congresses, asked to have a scientific investigation made into the causes of the formation of alkaloidal poisons; and the development of the virulent ptomaines that have in so many cases caused death. The reply was an astounding one: "they were not disposed to waste any money in such an enquiry so long as they could do plenty of business without." The use of tin for canning food has been adopted solely on account of its cheapness, and seemingly in America without any regard whatever being paid to public health, meat of the most dangerous kind being used without hindrance. The amount of tin dissolved into the food depends greatly upon the length of time during which the article of food is in contact with the metal. Dr. Van Hamel Roos instances a tin of asparagus, 31 years old, in which it was found that the tin had almost completely been dissolved off the iron; a tin of beef, eight years old, containing 970 grammes of beef, had 77 milligrammes of oxide of tin; six year old asparagus had only 56 milligrammes. Other tinned asparagus, two years old, weighing 635 grammes, had 36 milligrammes oxide of tin and six milligrammes of oxide of copper.

AN ENQUIRY NEEDED.

It would be in the interests of the large packers themselves to have an enquiry into the causes of these constantly occurring poisonings. Some of the revelations made as to the constituents of much of the imported canned food are calculated to raise grave doubts, and when to that is added the dread of poisoning by the use of tinned meats, it is high time there was a full scientific enquiry into the whole question. At present,

the cases of poisonings being scattered over the country, their frequency is scarcely known, and in many cases the diseases may, by not occurring immediately after partaking of the foreign canned food, not be debited to their true causes.

In the case of the semi-putrid Fraser River salmon, to which Mr. Wood refers, this class of food is doubly dangerous. At times the last catch is larger than expected, and the result is that the packers, unwilling to lose any of the catch of fish, curtail the boiling time necessary for thorough sterilisation of organisms and spores. The result is the spores develop and excite ptomaine poisons, which give no indication of their presence—such as ordinary putridity does, by bulging the tin—and the unsuspecting consumer is poisoned.

For a multitude of reasons, therefore, this trade requires close supervision.

DRAWING THE FANGS OF "THE GAS-ADDER."

THE public in these days suffers from many exasperating "exploiteurs," but the worst are those who ally to their wrongdoing a sort of Chadband and Mrs. Pardiggle sanctimony and philanthropy. We have, for example, the American oil gang one day organising prayer-meetings in their offices and the next day planning the blowing up by dynamite of a rival oil refiner's premises. In England we have gas company directors one day engaged in prayer and the next sending men to their death or forcing men to go on strike to serve the interests of monopolies. As long ago as September 3, 1892, we had occasion to contrast the practices of Mr. George Livesey and his fellows of the South Metropolitan Gas Company with their theories about workmen. We then said:—

"The result of the inquest on the man Westbrook, who met his death at Greenwich, cannot be looked upon as in any way satisfactory. The strong gases—sulphide of ammonia and sulphuretted hydrogen—rose from the deposits from the South Metropolitan Gas Works, and prior to Westbrook's death one of the workmen had had his sight affected. The death on Wednesday, when the workman Millard went into the hole that he and his fellow-workers were digging, ought not to have occurred. The danger of working in such an atmosphere as that of the hole in Greenwich marshes, and of breathing sulphuretted hydrogen and sulphide of ammonia, is one that the officials of the South Metropolitan Gas Company must have known. Millard, overpowered and well-nigh poisoned, asked to be drawn up, and, in the process of being hoisted to the surface, fell back overcome by the foul gases. The man Westbrook made an heroic endeavour to rescue Millard. He descended the hole, and had hooked Millard to the chain, when he fell back himself, overpowered by the poisonous gases, and died.

"A verdict of death from misadventure does not meet the grave demands of such a case. There are existing appliances by which the danger of working in such an atmosphere as that in the hole on Greenwich marshes can be much lessened. It was the duty of the coroner and jury to have demanded from Mr. George Livesey, his managers, and fellow-officials, why these appliances were not utilised. The Noxious Gases Act of 1881 was called into existence to deal with pollutions by manufactures of the nature seemingly carried on by the South Metropolitan Gas Company with impunity; but there is no record of any censure whatever being passed by the coroner upon the South Metropolitan Gas Company, whose pollutions caused the death of the unfortunate man Westbrook."

A workman was only murdered to save the South Metropolitan Gas Company the expense of a few respirators, that was all.

We do not know if that unctuous friend of humanity in general, and respirator-saver in particular, Mr. George Livesey, took the precaution to send a letter to the coroner, or if "sending a letter" is only a recent development of his lovable character—but, if he did, it was not of much real use, for, thanks to our exposures of this curious inquest, the *Daily Chronicle* asked Mr. George Livesey a few inconvenient questions, and the result was some scant provision for the widow of the man murdered by the Gas Company's disregard of their workmen's safety. Be it a man's body, or his reputation, it is apparently, however, all one to creatures of the Livesey type. We find in the Beckenham journal of February 20 last that another gas company, of which

this unctuous philanthropist is chairman (the Crystal Palace Gas Company), was fined at Bromley for defrauding the public by selling as gas an article not of the nature, substance, and quality demanded; but we also find a correspondence which, for impudence, low-cunning, and malevolence could only, we think, be paralleled by Mr. Livesey himself or that canting director of the South Metropolitan Gas Company who prayed to the Lord for all living beings and forthwith ruthlessly thrust starvation, by strike, upon helpless women and children. The correspondence speaks for itself, and shows the backstairs methods by which persons of the Livesey type seek to gain their ends and muzzle public officials who honestly do their duty to their employers—the ratepayers:—

"Crystal Palace District Gas Company's Offices,

"Lower Sydenham, S.E., February 10, 1897.

"To A. H. Baker, Esq.,

"Chairman Beckenham District Council.

"Dear Sir,—Instead of instructing the Secretary to reply to the letter of January 19, from your Clerk, forwarding a copy of a resolution of the Council relating to gas testing, I address you on the subject in the hope that the relations between the Council and the Company may thereby be put on a more satisfactory footing.

"In reference to the complaint that certain test papers placed in the apparatus by your tester were removed by the Company's officer the next day, I have to say that the Council have been misled; the test papers were wrongly left where they were found, and the Company's officer simply did his duty in removing them.

"The Act of Parliament prescribes, as your tester knows, an exposure of the acetate of lead test papers for three minutes in order to discover the presence of sulphuretted hydrogen in the gas, therefore to expose them for a longer period was an illegal act on the part of your tester.

"Further, your tester, as a chemist, knows and should have informed the Council that this test is of inconceivable sensitiveness, and that an exposure of three minutes is amply sufficient. I may state that it has been found by experiment that such an infinitesimal and utterly inappreciable quantity as one part of the sulphuretted hydrogen in a million parts of gas will distinctly discolour the test paper in a few seconds. Moreover, I may say that neither on this occasion nor any other, has sulphuretted hydrogen been found in the gas at Beckenham.

"While on this subject I must refer you to Dr. Rideal's letter to the Council of December 16 last, published in the *Beckenham Journal* of January 9, in which he goes out of his way and exceeds his duty in reporting to Beckenham what he says he found at Lewisham. He also said, 'I am advising Lewisham to persecute.' His duty is to report, not to act as legal adviser. Lewisham addressed a fair and business-like letter to the Company, which was answered in a like spirit and I believe satisfactorily, seeing they have not followed their tester's advice. Dr. Rideal acted differently in the case of the reported deficiency of illuminating power at Beckenham on January 12, for immediately after making this low test of 14.06 candles, he tested for Lewisham and found the gas equal to 15.4 candles, but this fact he kept to himself; it should at least have led him to think the low test might be due to an error.

"In reference to the conviction at Bromley last week, against which the company is appealing, for alleged deficient illuminating power, when it was proved in court that the low test was due to a defect in the apparatus, which an experienced and careful tester certainly would have discovered, I will only say that had the representatives of the Council been as anxious to act justly as they were to win the case they would, on hearing the explanation, at once have withdrawn the prosecution.

"On a former occasion, as well as last week, the magistrates gave the tester a fee of £5 5s. He is the paid officer of the Council, and his office requires that he shall be impartial, but his eagerness for prosecutions raises the suspicion that these five guinea fees, improperly asked for, and given, are at the bottom of it. At any rate, the company has lost faith in his impartiality.

"I do not believe that the body of Englishmen who form the Council wish to act otherwise than with fairness and consideration towards another body of Englishmen actuated by equally honourable motives.

"I do not think the Council, when it is put to them, are willing to take the position of the detective and to treat the company as if they believed its directors would cheat the public unless carefully watched. The testing of gas is by no means an exact science, and in the manufacture of gas there are unavoidable and uncontrollable fluctuations. The company however, in order to be on the right side, have almost invariably exceeded the Parliamentary requirements both as to illuminating power and purity. Since Dr. Rideal first began to test for Beckenham in 1891, I believe there have been only two excesses of impurity, while the illuminating power—and I include the two last tests—has never been deficient, and has averaged 1 candle or 6½ per cent. above the standard.

"Under these circumstances I do not think the instant issuing of a summons without giving the Company any opportunity for an explanation can be a source of satisfaction to a body of fair-minded men. I think the Company has the right to be treated as a body of honour-

able men, who have done their duty in the past and can be trusted to do so in the future. Such a course, I can assure you, would not be disadvantageous to the consumers, and it would promote goodwill between the Council and the Company.

"I remain, yours faithfully,
 "(Signed) GEORGE LIVESSEY,
 "Chairman C.P.D. Gas Company."

"28, Victoria-mansions, S.W., February 13, 1897.

"Dear Sir,—I desire to make the following observations upon the letter of Mr. George Livesey, the Chairman of the Crystal Palace Gas Company, to the Chairman of the Council:—

Test Papers.

"In the recent prosecution for defective illuminating power, the Company demanded that the case should be dismissed on the ground that I had not reversed the photometer disc. This reversing of the photometer disc is only compulsory in the metropolis, under the Gas Referee's instructions, and does not apply to Beckenham. On the other hand, the Gas Referee's instructions require a 24 hours' exposure of test papers for sulphuretted hydrogen, whilst outside the metropolis the statutory test is three minutes. In the one case, therefore, where it suits the Company's purpose, they desire me to follow the Gas Referee's instructions; in the other case, because it does not suit their purposes, they blame me for having done so. Comment seems unnecessary.

"In any case, the papers were initialled by me, and, to say the least of it, it was a very questionable proceeding for the Company's officer to remove them, having regard to the fact, as shown by my experiments elsewhere, that, at the time in question, the gas *did* contain sulphuretted hydrogen.

Illuminating Power.

"It is not true that I concealed the fact that the gas at the Company's works, one hour after my official test at Beckenham, was one candle power higher than at Beckenham. I pointed this out to your Clerk. This difference in illuminating power has occurred on many previous occasions and is a very significant fact.

"The Chairman is kind enough to suggest that I am actuated by the basest of motives in carrying out my official duties as gas examiner. I will deal with this paragraph with Mr. Livesey direct, or rather through the medium of my solicitor.

"The remainder of the letter is more for the Council than myself, but it is difficult to say why Parliament conferred upon the Beckenham District Council the power to examine gas and take proceedings to keep the Company up to its obligations if these powers are not to be exercised.

I am, dear Sir,
 "Yours faithfully,
 "SAMUEL RIDEAL."

Mr. Lendon did not think the letter from the Chairman of the Gas Company ought to be sent to a committee without at least some member expressing an opinion on one point in connection with it. He was not going into the merits of the case as between themselves and the Crystal Palace District Gas Company. It was still *sub judice*, and it would be improper to speak upon it. They had, however, their Clerk's advice in the matter, and that was to resist the appeal, and he had no doubt the Council would support—indeed, he thought it had supported—the Clerk in that advice. But he did not think they should allow one sentence in the letter to pass without an expression of their views upon it. The sentence in question was:—"His eagerness for prosecutions raises the suspicion that these five guinea fees are at the bottom of it." He could hardly conceive any accusation being more intolerable to a man of rightmindedness and honour, as he was quite sure Dr. Rideal was. If it was not a libel it was perilously near one, and he certainly thought that they ought in some way or another to protect their officer. Dr. Rideal was an officer of the Council, and he should be the first to have a strong word to say if, in his opinion, any officer of the Council did not do his duty, while he should be equally the first to protect their officers when he saw that they had discharged their duty loyally and properly to the Council. He did not on this occasion intend to move any resolution, but he hoped he should have the unanimous approval of the Council in condemning the accusation made by Mr. Livesey. (Applause.)

Mr. Gurney Smith said that even the motives of the Clerk were impugned by the letter, which said that the Council was more anxious for a conviction than justice, and he thought that was perfectly unwarrantable.

Dr. Randell objected to the letter *in toto*. This was a case in which the Council were looking after the well-being of the place generally, and they had had occasion, so to speak, to call the Gas Company over the coals. They had done their duty and brought the matter in a court of law. The magistrates had convicted the Company, and now the Company, having given notice of appeal, he thought the letter was an attempt to influence the Council to abandon the position they had taken up, and he objected most strongly to it. The members of the Council were sent there to see that things in Beckenham were properly administered. If a man sold adulterated milk he was proceeded against in exactly the same way as the Gas Company had been proceeded against for supplying inferior gas, and why should a poor milkman be prosecuted and a rich Gas Company let off.

Mr. Harbert suggested that no notice or action be taken of the letter until the appeal had been settled.

The Chairman: The Council are going to resist the appeal.

Mr. Harbert said Dr. Rideal had stated that he should deal with Mr. Livesey personally.

It was agreed that the letter should lie on the table.

We congratulate the Beckenham Council on their straightforward action in this matter, and trust Dr. Rideal will teach his traducer a well-merited lesson. The mean, malevolent insinuation with a less honourable Council might well have raised a doubt as to Dr. Rideal's integrity, and Mr. Livesey should be taught that people convicted of defrauding the public are the very last who should have the temerity to suggest that those who stop their plundering do so for *fees* only. We do not suppose Mr. George Livesey could understand it, but there really exist men who are actuated by principle. It would be well for the consumers if there were some "thorough" work in the South Metropolitan Company's districts even if burglars and footpads found the transition from semi-darkness to light interfere with their occupations. We know of none others who have any cause to bless the Company. We consume some of the article they call gas, so we speak from experience.

PROCESS FOR PURIFYING DETERIORATED BUTTER.

THIS process, for which a patent has been taken out by Joseph G. and Alfred Hargrave, of The Larches, Heaton Mersey, near Manchester, is principally to be used, says the *British Baker and Confectioner*, in the treatment of butter which may, by defects in manufacture, or by deterioration in storage, or from other causes, have developed strong or rancid flavours, or have become otherwise more or less repugnant to taste or smell. Apart from this, however, the invention may be used to improve the quality of fats so as to make them command higher prices.

In treating butter, for example, it is necessary first to disintegrate or break up the butter into small separate particles or atoms, and then to subject the same to the action of sprays, or showers, or currents of water so as to thoroughly cleanse, permeate and purify the disintegrated mass of particles.

The first stage, viz., disintegration, is effected in the following manner. The butter to be treated is melted in a suitable vessel, and, when reduced to the condition of an oily fluid, is run down an inclined conduit or trough, and in the said conduit or trough is met by a stream or streams of cold water, which may be artificially refrigerated to have the greater effect. The consequence of the sudden contact between the hot melted butter and the cold water is, that the melted butter is broken up and transformed immediately into a granulated or atomised mass of separate particles, which are carried by the current of water into a vat or pan where the granulated or disintegrated butter floats on the surface of the water. This floating mass of granulated or disintegrated butter is then subjected to the second stage in the process.

The most convenient method of doing this is to arrange above the vat or pan containing the floating butter a series of water-sprays or perforated roses, through which cold water is forced or allowed to fall in a spray or shower upon the floating butter. This treatment is kept up for a number of hours, the time varying according to the quality or nature of the butter being treated. When sufficiently purified, the butter is removed from the vat, and will then be found to be perfectly sweet and odourless. The purified granular mass may then be worked, churned, or otherwise suitably treated, so as to restore it to a marketable condition.

Instead of spraying or showering the water upon the floating disintegrated particles as described, the same might be subjected to agitation in the water in the vat by suitable means, such, for instance, as paddles or jets,

or a current or currents of water, or air blasts, might be directed into the vat either from beneath or at the sides, the vat being constructed with suitable overflows to carry off excess water.

In all such modifications the object is the same, viz., to bring the separate particles into intimate and repeated contact with the water. The falling spray or shower, however, is the preferable method.

The method of breaking up and disintegrating the hot melted butter might also be modified to some extent, but in all cases it is essential that it should be brought into sudden contact with cold or refrigerated water, so as to separate the liquid fat into independent small particles.

Although butter has been particularly referred to as the material treated, the invention is also applicable to the treatment of butter substitutes, and to other solid fats and oils.

SIR BENJAMIN WARD RICHARDSON AND CYCLING.

"SIR BENJAMIN'S attention seems, says the *St. James's Gazette*, to have been first drawn to cycling in 1868, when he saw a bone-shaker standing against the wall in a French village near Dieppe, and learnt that it was the local doctor's "iron horse." Nine years later there was a Sanitary Congress held at Leamington, at which bicycles and tricycles from Coventry were exhibited. Richardson saw the advantages of the machine for outdoor exercise, and mounted and rode a tricycle forthwith:—

"The incident that occurred at the Leamington Congress in respect to cycling gave me a new inkling as to the reduction of disease and a means of advancing the general health. I argued that if, on trial of it, we could go about in the open air as we did on horseback, it must be healthful to us physically, as it must be charming mentally. The idea led me to Coventry to see the work going on there in the manufacture of cycles, and I saw in it a new trade, a constructive trade, not only of tricycles such as have been described, but of two-wheel machines also, bicycles."

"He soon became an ardent wheelman, and founded a society of cyclists to promote the exercise in the interests of health. He admits that it has its 'dangers and its drawbacks,' but claims that 'nothing has given so grand an impulse to the health-movement as the cycling crdsade.' He thinks that since 'all the world' has gone in for cycling 'the advance in health and strength has been unparalleled.' If that is so, the advance has been uncommonly rapid, for all the world only took to it the day before yesterday. It is characteristic of Sir Benjamin Richardson to ascribe all the benefits of the athletic movement to the one form of exercise with which he was acquainted, though it was the latest born of all, and to ignore all the older forms—the games, rowing, gymnastics, and so forth."

England will realise the pernicious effect of cycling in another generation, when this unphysiological exercise will disclose its results in the sterility of its victims, and we shall be found as France is, face to face with the problem of a decreasing population. Just now the cycle boomers contrive to suppress the truth about the baneful effects of cycling, especially on women. Medical men, however, will shortly have, *volens volens*, to speak plainly of its evils.

THE MANCHESTER, SALFORD, AND DISTRICT GROCERS' ASSOCIATION AND FOOD PRODUCTS ADULTERATION

THE following is the full text of a report which has been prepared by a Committee of the Manchester, Salford, and District Grocers' Association on the Report of the Select Committee of the House of Commons on Food Products Adulteration:—

Clause 1. That in districts other than county boroughs, where the local authorities fail to put the

Acts in force, the County Council should, by their own efforts, take samples for the purposes of the Acts.—Approved.

Clause 2. That in connection with the sale of mixed articles it should be obligatory upon the vendor to supply the purchaser with a label setting forth that the article is mixed.—Approved.

Clause 3.—That the statement of admixture on labels should be legibly and distinctly printed and so as not to be obscured by other printed matter, and the existing labels should be subject to the proviso mentioned in the concluding paragraph of the section of this report, headed "Labelling and sale of mixed articles."—Approved.

Clause 4. That subject to the limitations indicated in the report, invoices and equivalent documents should have the force of warranties in the cases of all articles to which the Sale of Food and Drugs Acts apply.—Approved subject to a further recommendation that the limitations apply to perishable articles only.

Clause 5. That the Commissioners of Customs be authorised to examine and take samples of all food imports at the port of entry with a view to subsequent action, as indicated in the body of the Report, and

Clause 6. That dealers who obtain supplies of food from abroad should be required to submit to the Customs guarantees of purity given by the foreign vendor, together with evidence that they have taken measures to see that the goods are such as they are guaranteed to be.—Approved subject to the following addition: "That on discovery of a consignment of food being adulterated, the Customs officers should be empowered to detain, at the risk of the consignee, any future similar consignments coming to him from the same quarter, pending the analysis of the same."

Clause 7. That retailers should be empowered to refuse to sell an article otherwise than in a manufacturer's unopened labelled tin or packet.—Approved.

Clause 8. That the powers of Section 3 of the Sale of Food and Drugs Act Amendment Act, 1879, as to the taking of samples of milk in transit, should be extended to other articles.—Approved.

Clause 9. That the maximum penalty for refusal to sell a sample to the authorised officer be increased.—Approved.

Clause 10. That the division of the sample after purchase and delivery of a portion to the vendor shall be compulsory.—Approved.

Clause 11. That samples should be divided into four instead of three parts, and that one of these parts should be at the disposal of the wholesale dealer.—Approved.

Clause 12. That the provisions of Section 5 of the Margarine Act, 1887, as to the exemption of an employer from penalty in certain cases, and punishment of an assistant, should be extended to offences under the Sale of Food and Drugs Acts.—Approved.

Clause 13. That it should be obligatory upon the magistrates or Court to refer articles to the Government Laboratory for analysis when such course is desired by either of the parties to the case.—Approved.

Clause 14. That a defendant who proposes to rely upon the warranty defence should be required to intimate this to the prosecutor within a reasonable time of the service of the summons.—Approved.

Clause 15.—That the time allowed for appeal to quarter sessions from decisions of local justices should be extended from three to fourteen days.—Approved.

Clause 16. That any person guilty of a second offence under the Sale of Food and Drugs Acts should be liable to a minimum penalty of £5, and that in respect of the third or subsequent offences under those Acts and the Margarine Act, 1887, the punishment of imprisonment without the option of a fine may be inflicted at the discretion of the magistrates or court.—Approved that for the second offence the offender should be liable to the minimum penalty of £5; but for the third or subsequent offences this Committee do not

agree that the offender should be liable to imprisonment without the option of a fine. If, however, the Select Committee's recommendation on page 30 of their report (not set forth in the summary of recommendations), viz., "That it is expedient that margarine for the market should be packed in a prescribed form of box or receptacle, and that while it is exposed for sale it should remain in such receptacle," were adopted, then this Committee recommend that in respect of the third or subsequent offence under such amendment of the Margarine Act of 1887, the punishment of imprisonment without the option of a fine should be inflicted.

Clause 17. That magistrates should be authorised to make orders at their discretion, requiring a person convicted of offences under the Acts to publish a notification of his conviction in the public press of the locality where the offence occurred.—Disapproved.

Clause 18. That the definition of the word "food" as used in the Acts should be amended so as to include expressly all articles intended to enter into or to be used in the preparation of flavouring of food.—Approved.

Clause 19. That an authority should be constituted who should act as a court of reference upon scientific and other questions arising under the Acts, and who should be empowered, at their discretion, to prescribe standards and limits of the quality and purity of food.—Approved subject to at least one-half of such court of reference being composed of manufacturers and traders affected by the Act, and that no public analyst be eligible for appointment on such court of reference.

Clause 20. That candidates for appointment as public analysts should be required to produce evidence that they possess the requisite knowledge of analytical chemistry in the shape of a diploma or certificate given in respect of such knowledge by a recognised school of chemistry, or scientific examining body, and that in the case of candidates other than duly registered medical practitioners, specific tests of the requisite knowledge of microscopy and the bearing of adulteration upon health should be prescribed.—Approved.

Clause 21. That the remuneration proposed to be given to a public analyst should be subject to the approval of the central authority.—Approved.

Clause 22.—That the artificial colouring of margarine to resemble or imitate butter be prohibited.—Approved—but this committee considers that the recommendation on page 30 of the report, and which seems to have been inadvertently omitted in the summary of recommendations, viz.: "That it is expedient that margarine for the market should be packed in a prescribed form of box or receptacle, and that while it is exposed for sale it should remain in such receptacle," is one of the most important recommendations made by the Select Committee, and is, in their opinion, a safeguard against frauds.

Clause 23. That the mixing for sale of margarine and butter be prohibited.—Approved.

This Committee approves of your recommendations, page 25, paragraph 5: "That all tins containing milk such as that referred to should be required to bear labels on which the words, 'Condensed Skimmed Milk,' are printed in large and legible type, and that an additional notification be printed thereon that such milk is not suitable for the feeding of infants and young children," and regrets that the Select Committee have not apparently considered the same of sufficient importance to include it in the summary of principal recommendations.

WATER IN BUTTER.

THE Committee of the Governors of the Munster Dairy School and Agricultural Institute, Cork, have issued the following interesting report on the above subject, which includes a series of experiments carried out by R. H. Beamish, W. B. Harrington, F.C.S., and T. A. Forrest. The report covers some 44 pages, with

elaborate tables of variation of water found, temperature, etc., and concludes with the expert's report:—

"The great importance to the Irish farmer of the relative value placed upon his butter, in comparison with that of foreign manufacture, has directed our attention to the legal proceedings against the vendors of heavily-salted Irish butter, which were instituted in Manchester during the months of January, February, and March, 1894. The ground of these proceedings was the large percentage of water found in Irish butter. The presence of so large a proportion of water was defended upon the plea that it was unavoidable under certain conditions of manufacture, so that it did not, therefore, necessarily constitute a fraud on the part of the makers. The results of the Manchester prosecutions were practically to leave undecided and in obscurity the question of a water standard.

"In former times, when the supply of winter-made butter fell short of the demand, and when consequently the winter prices were far higher than those in summer, it was found profitable to salt the summer butter heavily and to hold it over for winter consumption. Although at this time the French butter had already begun to affect the markets, yet, as it only included the highest form of butter, made for immediate consumption by the wealthier classes, and at prices so high as to be prohibitive to the English operatives, this fact did not seriously interfere with the sale of Irish heavily-salted butter, the consumers of which had been gradually educated to appreciate its flavour.

"The two principal processes adopted in Ireland for the preservation of butter are:—

"(1)—The so-called brine-salting or pickling;

"(2)—The dry-salting.

"The pickling process may be briefly described as the introduction of the saline particles throughout the mass of the butter by means of washing and kneading in brine. The brine consists of a saturated solution of salt and water. It has been customary to believe that butter, when pickled, preserves its condition for a longer period than when treated by any other system of salting, one of the reasons assigned being that when salt is in solution its particles are more evenly distributed through the mass of the butter. During the warmer months of the year, the brine is usually applied some 10 deg. F. higher than the temperature of the cream when churned; but in cold and frosty weather this standard of brine temperature is raised, and, unfortunately, the percentage of water increases in proportion to the increased temperature of the brine. As much weight is necessarily and rightly laid upon popular statements of this kind, it would be unadvisable to condemn the method without recourse to exhaustive enquiry.

"The difficulty of forming an opinion on the relative merits of butter dry-salted and pickled has been intensified by the fact that the advocates of either system have generally based their arguments upon a butter pickled in one dairy, under certain conditions of temperatures, cream and churning, compared with another butter dry-salted under other conditions of manufacture.

"It is, however, admitted that the keeping quality of the butter is not wholly derived from the presence of salt, but may be attributed to the condition of the cream when churned, the manner of churning and working employed, etc. Consequently, all extraneous conditions that may lead to the formation of an inaccurate conclusion must be first eliminated, and deductions ought only to be drawn by comparison between the two forms of salted butter which have been obtained from the same class of cream similarly treated previous to the two methods of salting.

"In recent years keen competition, and consequent low prices, have revolutionised the butter trade. The Germans and Scandinavians discovered that quantities of butter might be produced in winter, as well as in

summer, when their herds were carefully housed and liberally fed. It was recognised that winter-fed cattle produced large quantities of valuable manure, and that the difference between the prices obtained in winter and those procurable in summer compensated for the trouble and expense which must arise in the production of butter made in winter. At first much fault was found with the article by merchants and retailers, both as regards flavour, colour, and general appearance; but judicious alteration in the method of feeding employed, combined with greater knowledge acquired in the manufacture of the article, gradually but surely overcame these faults, until, at last, mild-cured winter butter was brought face to face with the Irish butter rickled in and held over from the previous summer and autumn.

"Both Irish and foreign butters being now sold side by side, it was inevitable that a comparison should be made between them, and eventually it was found that the heavily-salted Irish butter contained a higher percentage of water, and thereby embodied less nutritive properties pound for pound. The ultimate recognition of this fact resulted in the legal proceedings which were instituted at Manchester.

"It has been our endeavour first to ascertain the percentage of water in butter which has been dry-salted or made fresh in Munster; next to compare the relative keeping qualities of dry-salted and pickled butter; and, finally, to draw certain conclusions upon the general scope of the experiments. It only remains for us to add that as the means at the disposal of the Governors were small, the investigations undertaken, and the deductions derived therefrom, can only be of a tentative character. They may, however, indicate the manner in which such experiments should be carried out on a more comprehensive scale.

"THE PERCENTAGE OF WATER CONTAINED IN IRISH-MADE BUTTER WHEN EITHER DRY-SALTED OR FRESH.

"In order to test the average percentage of water contained in the butter when dry-salted or fresh, 196 analyses were made in all. Of these 32 were of samples derived from butter procured from Sweden and Australia, and analysed for the purpose of comparison with our Irish butter. Excluding the foreign samples, we shall first proceed to deal with the 164 analyses obtained from four principal sources:—

- "1. The Munster Agricultural and Dairy School;
- "2. Estates on which the butter is made with great care and supervision;
- "3. A Co-operative Dairy;
- "4. Tenant-farmers.

So far as can be ascertained, none of the butter has been made with the extraneous assistance of ice.

"Tables 1 to 10, inclusive, contain the individual analyses of the butters, together with the dates upon which they were analysed. The samples were usually

churned a week or ten days prior to the dates of these analyses.

"Table 13 contains the summary of each sub-section of the various groups.

"Table 14 includes each group summarised in two forms:—

"1. The number of samples under the various percentages of water;

"2. The percentage of samples under the various percentages of water.

It may be at once seen that by the sacrifice of only 4.05 per cent. of the tenant-farmers' butter, or, in other words, by an improvement of make to the same extent, all the groups would contain less than 18 per cent. of water; and by a further improvement of 6.76 per cent. of the tenant-farmers' butter, all the groups would contain less than 17 per cent. of water.

"At the present stage of knowledge among the Irish butter makers, the standard for dry-salted butter, so far as these experiments indicate, ought not to be higher than 18 per cent. for water; while improvement in the system of teaching might reduce this quantity to below 15 per cent. That such an improvement is urgently required, if the Irish butter maker is to exchange his present precarious condition for the assured position in the butter trade of the world that the conditions of his native climate and soil should secure for him, the analyses of the Australian and Scandinavian butters convincingly show.

"COMPARISONS DRAWN BETWEEN PICKLED AND DRY-SALTED BUTTER WHEN EACH SET OF SAMPLES HAS BEEN DERIVED FROM THE SAME CREAM AND CHURNED IN THE SAME CHURN.

"The process of comparison adopted by us on the relative merits of pickled and dry-salted butter may be described as follows:—

"Five samples of butter were selected at each churning, from the same cream and salted—

- "(1) With 6.25 per cent. of dry salt;
- "(2) With 9.40 per cent. of dry salt;
- "(3) With 12.50 per cent. of dry salt;
- "(4 and 5) Pickled at temperatures varying between 58 deg. and 105 deg. F.

"On examining tables 17 and 18, it may be seen that the temperature of the atmosphere varied between 42 deg. and 78 deg. F. during the experiments, so it may be assumed that they were carried out under all conditions of temperature likely to be experienced during an ordinary spring or summer.

"The results of the three forms of dry-salting average 11.95 per cent. of water and 5.32 per cent. of mineral salts, as against an average of 26.44 per cent. of water and 5.54 per cent. of mineral salts in the pickled butter.

"The only conclusion to be drawn from these analyses is that the salt appears to be as successfully

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"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,

Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London; Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

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mixed by dry-salting as by pickling, while the great and only difference between the two systems lies in the fact that the pickled butter contained 14.49 per cent. of water in excess of the dry-salted samples. If this difference in the quantity of water is reduced to figures of value, it may be stated that when 1s. per lb. be paid for the dry-salted butter, 10½d. would represent the comparative value for the same quantity of pickled butter. If, therefore, the quality and keeping power of the dry-salted butter can compare favourably with that of the pickled article, no difficulty need be experienced in deciding on which is the better of the two processes.

"Before entering upon the expert's report on this subject, we deemed it advisable to examine

"THE RELATION OF CURD IN DRY-SALTED AND PICKLED BUTTER,

as it is acknowledged that the presence of curd in butter is distinctly injurious to its keeping qualities, on account of the unhealthy fermentations which are set up thereby, and its presence therefore constitutes one of the principal difficulties in preserving butter for any length of time.

"It has been sometimes stated that the application of hot pickle to butter aids in washing out and dissolving the curd more thoroughly, and that the process of pickling is consequently of actual advantage to the keeping quality of the butter. On referring to tables 15 and 16, the average percentage of curd in dry-salted butter was 0.76, and the average in all the varieties of pickling was 0.71, or a difference in the percentage of curd of 0.05 in favour of the pickled butter. Although this shows that the pickled butter contains rather less curd, it must be remembered that this difference is nearly accounted for by the increased percentage of water in the pickled butter, so that, in fact, there is no practical difference at all between the two kinds of butter.

"Consequently, from this investigation, it is clear that the statement that the percentage of the curd in butter is appreciably affected by hot pickling, as against dry-salting, may be dismissed; unless the raised temperature may in some way modify the constituents of the curd, and thereby render it less injurious. This we have no means of ascertaining.

"THE EXPERT'S REPORT.

"On turning to the expert's report, it will be seen that each set of five samples were examined together, and that the dry-salted samples have been nearly invariably superior to those pickled in brine, as regards both flavour, colour, texture and keeping quality. So much so is this the case, that the true market and nutritive value of the pickled samples ought to be placed lower than 10½d. per lb. when 1s. is taken as the comparative standard of corresponding dry-salted butter. These experiments do not, therefore, bear out the general supposition that it is necessary to pickle butter in order to preserve it successfully.

"GENERAL CONCLUSIONS.

"Attention must be drawn to one striking fact in connection with these experiments—the abnormal variations which arise in the percentages of mineral salts. In Table 15 the variations may be summarised as follows:—

| Quantity of salt used. | Variation in the percentage of Mineral Salts. |
|------------------------|---|
| 6.25 per cent. | between 2.38 and 6.03 or 3.75 per cent. |
| 9.40 per cent. | " 3.53 " 8.02 " 4.49 " |
| 12.50 per cent. | " 2.77 " 15.00 " 12.23 " |

"As the percentage of ash, not including the salt added, is unusually limited from 0.1 to 0.28 in butter,

these facts would tend to prove that the salt has been inadequately mixed, and fault must be found with the system of mixing employed.

"Salt ought to be evenly and intimately incorporated with the butter in order to secure the full benefit of its preservative quality, because the keeping quality of the butter does not depend so much upon the quantity of salt applied, as it does upon the intimate relation in which it is mixed.

"Less salt when thoroughly mixed, is to be preferred to the addition of large quantities of salt unevenly and slovenly worked into the butter.

"The experiments tend to prove that the keeping quality of butter is not to be attributed to the use of hot pickle, while the deterioration in the value of the butter, due to the abnormal quantity of water which this system involves, is strongly to be deprecated.

"Increased attention to the cleanly manner of milking the animals, which would include the cleanliness of the cows themselves and the hands of the milkers, combined with careful treatment of the milk and a correct method of ripening the cream, would do more than anything else, including the free use of ice, were this possible, to raise the present standard of Irish butter to a position from which it could scarcely be dislodged by foreign competitors.

"Two questions of vital importance to Irish dairy economy have yet to be solved:—

"1. To reduce the cost of milk production to as low a standard as possible consistent with quality;

"2. To raise the standard of texture as high as the means at our disposal will allow.

"The question of ripening cream in a manner which can be practically applied in creameries and dairies will probably form the next subject of investigation by the Governors of the Dairy School.

"It only remains for us to tender our sincere thanks to the gentlemen who so carefully carried out the various analyses, and especially to Mr. D. J. O'Mahony, F.C.S., City and County Analyst, for liberally assisting the Sub-Committee by giving them his valuable services gratuitously, and to Mr. H. A. Lidholm for his permission to obtain the Scandinavian butter direct from the Swedish dairy."

Copies of the full Report, 6d. each, can be had on application to the Secretary, 15, South Mall, Cork.

COAL TAR DYES AND DIGESTION.

THE effect which coal-tar colours may exert upon digestive ferments has received attention at the hands of H. A. Weber (*Jr. Am. Ch. Soc., Ph. Jr.*), who has experimented upon pepsin and pancreatin with selected dyes in common use by confectioners and others. For the experiments on peptic digestion the colour to be tested was added to the following mixture: Hydrochloric acid solution (0.2 per cent.), 100 c.c.; pepsin, 0.020 gm.; blood fibrin preserved in alcohol, 1 gram. The fibrin was washed with water before use to remove alcohol, and excess of water removed by pressing between filter paper. The mixture was placed in a test-tube and heated on a water-bath at a temperature of 38 deg. to 40 deg. until the fibrin was as far as possible dissolved. Under these circumstances, oroline or acid yellow was found to exert a marked injurious affect upon peptic digestion, but no effect was produced by saffoline (acridine red), magenta, or methyl orange under similar conditions. The mixture used for the experiments on pancreatin was as follows: Water 100 c.c., sodium bicarbonate, 1.5 gram; pancreatin, 0.3 gram; fibrin, 1 gram, and in this case the action of the ferment was unaffected by oroline yellow. On the other hand, saffoline, magenta, and methyl orange completely stopped the action of pancreatin in strong solutions and retarded it to a marked extent in weaker ones.

MEAT.

AT Clerkenwell, Edward Tutt, dealer in live animals, of 34, Hungerford-road, Holloway, was summoned by the Holborn Board of Works for depositing at a meat salesman's premises in Charterhouse-street, on January 26, February 8, and February 22, two sides of beef, on each occasion, which were diseased and unfit for human food. Mr. Matthew Hale prosecuted, and Mr. Ricketts, jun., defended. Sanitary-inspector Billing proved seizing the meat, and Dr. Bond (medical officer) deposed that it was diseased and unfit for food of man. It appeared that the meat was very carefully "dressed" in order to hide its appearance, in one case rolls of fat of another animal being skinned to represent kidney fat, the true kidney fat having been removed. In one case the animal had been dropsical, in the second it had suffered from tuberculosis, and in the third the animal had suffered a wasting disease. For the defence it was contended that the defendant being a cattle dealer and not having an opportunity of seeing the animals after they left the slaughterhouse, had not the same knowledge of the condition of the meat as those who did their own killing. He trusted to the meat being inspected at the slaughter-house. Mr. Bros said, allowing the defence, he would impose a fine of £25, with 6s. costs. In the last case the thinness of the animal ought to have been obvious to the defendant.

PURE BEER COMMITTEE.

AT the eighth meeting of the Pure Beer Committee, Mr. Cornelius O'Sullivan, for 30 years chemist to Messrs. Bass, Ratcliffe, and Gretton, gave interesting evidence with reference to Burton ales. In reply to the chairman, the witness said that the brewers of Burton generally used adjuncts. The pale ale and higher class of Burton ales were brewed entirely of barley malt and hops; but in the case of ordinary public-house beer some used adjuncts such as sugar. He did not consider it advisable to prevent by law the use of adjuncts in brewing so long as they were not deleterious. In his experience he had found it necessary to use these malt substitutes more largely when brewing with English barley than when brewing with foreign barley. During the past year they had had no difficulty in getting plenty of English barley, but had found it also desirable to buy a considerable amount of foreign barley. This was done to meet the public requirements of fineness of flavour, and palatable character with a certain amount of lightness, and in order to produce that they had to use foreign barley. They found that the beer had "more style," as it was called, when there was a certain admixture of foreign barley. He was aware that a considerable quantity of flaked maize and rice was used in the manufacture of beer, but at Burton what was probably used was invert sugar. He believed if there was a sufficient quantity of good ripened English barley it would be able to hold its own against malt substitutes. He considered it would be absolutely unfair to publish the materials used in the manufacture of their beer because of the prejudice that exists against the use of adjuncts. No matter how good the beer was it would tell against the manufacturer.—Mr. A. Gordon Salamon was further examined, and the committee adjourned.

**A SHERIFF ON PHARMACEUTICAL SOCIETY
BADGERING.**

AT Airdrie, on March 15, five doctor's assistants pleaded guilty of selling poisons without being registered under the Pharmacy Acts. Sheriff Mair strongly denounced the action of the Pharmaceutical Society in

bringing cases against assistants in the way they were doing, and said he had little hesitaton in condemning these Acts of Parliament. To mark his sense of this, he only inflicted a fine of half-a-crown, and half-a-crown costs in each case.

MR. KEARLEY'S BILL.

CONSIDERABLE anxiety prevails in the grocery and kindred trades in consequence of the proposals respecting the Margarine Act, and also with regard to the Bill which Mr. Chaplin intends to introduce in order to give effect to the recommendations of the Committee on Food Adulteration. A circular has just been sent to Lancashire members by the Manchester Margarine Defence Society, in which they are asked to assist in withstanding the attacks of the agricultural party upon the sale of that article of consumption. The third and fourth sections of Mr. Kearley's Bill, which propose imprisonment and the pillory of publicity for second and third offences, are described as "intolerable" and "wholly bad." "The grocery and provision trades," the circular continues, "have been hitherto whipped with cords," but Mr. Kearley's Bill would "thrash them with scorpions." The society have made representations to Mr. Balfour and Mr. Long, who are stated to have received them favourably.

KISSING THE BOOK.

MR. F. N. RICHARDSON, consulting chemist to the Bradford Corporation, has just completed the analysis of a Testament used in Ripon Court-house sixty years, and said to have been kissed by 40,000 people. The analysis was with a view of ascertaining the danger or otherwise of the practice of kissing the book.

There were no germs of typhoid fever, tuberculosis, or diphtheria. He had separated seven species of micro-organisms, which cover the three divisions of the fungi order. The only germ found of a dubious character was the pus cocci, which is usually found on wounded or sore skin. Although these germs were not necessarily harmful, there were conditions in which they might produce unpleasant complications, and he would not kiss any surface upon which they were spread. If salivary germs could be left in that manner, other microbes of a more dangerous character could be left, which was a strong argument against kissing the book.

THE FRIED FISH SHOP.

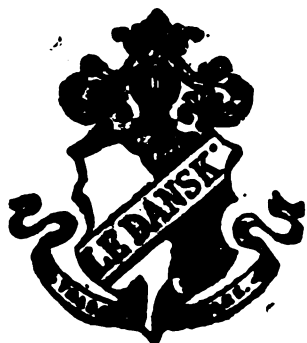
AT Leeds Assizes, Mr. Frederick Sykes Wooler, solicitor, of Batley, sued for an ejectment order against the keeper of a fried fish shop, named Musk, on the ground that the premises were a nuisance to the public.

For the plaintiff the case was that the odour arising from the cooking of fish and potatoes was a nuisance, and injurious to health. Witnesses gave evidence to this effect, including a sanitary inspector, who said there were 36 fried fish shops in Batley—"all nuisances." Mr. Elliott, a member of the Batley Town Council, described the smell as "offensive enough to sicken anybody."

For the defence witnesses were called, who thought the smell was not at all offensive. One deposed that a number of people had gone into the shop and said they had been drawn in by the smell. (Laughter.) Another stated that the odour to him was always "pleasant and balmy," and he had grown to like it. (Renewed laughter.) A third admitted that he did not like the odour of boiling fat, but he "hadn't smelled it much." He couldn't smell much at any time. (Laughter.)

The jury found for defendant.

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Food and Sanitation.

SATURDAY, APRIL 3RD, 1897.

THE SOMERSET HOUSE COW AGAIN.

MR. JOHN HUNTER, Midlothian County Analyst, writes in the *Edinburgh Evening Dispatch* re a recent prosecution:—

"Dr. Drinkwater quotes 'the evidence of Mr. Bannister before the Select Committee of the House of Commons.' Had Dr. Drinkwater quoted from this

evidence in Court, we were prepared to make Dr. Drinkwater look as awkward as he did when the Somerset House standard was put into his hands.

"We all know what evidence given before a Commission or a Select Committee means, and Dr. Drinkwater also well knows that there has been as much 'expert' rubbish put in the Blue Book as was ever uttered in the Sheriff Court.

Dr. Drinkwater appears to pin his faith to the evidence of Government chemists, given before Select Committees, and to Mr. Bannister's evidence in particular. I am surely justified in meeting Dr. Drinkwater's argument by referring to the evidence of Mr. Bannister's superior, given also before a Select Committee, where the question was whisky in place of milk. This superior Government chemist said that potato spirit—'Berlin spirit'—was a purer alcohol than the best and oldest of Scottish malt whiskies, and should, therefore, be a safer and better thing to drink. We in Scotland, however, use this Berlin spirit for making varnish, or for burning in lamps, whereas, if we are to swallow the standards of Dr. Drinkwater and his Government chemists, we will be toasting Her Majesty in June with varnish or lamp spirit in place of unadulterated 'old Scotch.'"

The reference to the well-known incompetence of the Somerset House analysts was caused by a milk containing 1·8 per cent. of fat being claimed genuine on the Somerset House authority by Dr. Drinkwater. We are surprised that any doctor could hold so absurd an opinion.

The case out of which Mr. Hunter's caustic letter arose was one in which Robert Campbell, Old Pentland, Loanhead, was charged with selling milk which had been altered by removal or abstraction of at least 17 per cent. of its natural fatty constituents. He pleaded not guilty, being defended by Mr. Abel, advocate. After expert evidence had been led—Mr. Hunter, analyst for the county, speaking for the prosecution, and Dr. Drinkwater, analyst to the Edinburgh and Glasgow Dairykeepers' Association, for the defence—Mr. Stewart addressed the Bench. Sheriff Maconochie said he thought it was unnecessary to call upon Mr. Abel to reply on behalf of the accused, because he did not see his way to find the case proved. It was perfectly true that Somerset House had fixed 2·75 as the ordinary percentage of fat in sweet milk. But that had no further authority than this, that it was the percentage that was usually found. But here was milk with 17 per cent. less than the Somerset House standard. He had been referred to a number of cases, but in every one of these cases there were exceptional instances of less fat being found than 2·5, and Dr. Drinkwater himself, from a perfectly healthy cow, in one case found 1·8 of fat only. In the circumstances, he did not think that he was entitled to say that it was proved to his satisfaction that the accused had wilfully abstracted 17 per cent., and he therefore absolved the accused.

The people of Edinburgh are sincerely to be pitied for having such an ignorant person as Sheriff. Average pure milk contains nearer 4 per cent. of fat than the swindling 2·75 sanctioned by the incompetent chemists of Somerset House, and which Edinburgh "Simpsons" can apparently sell with the approval of Mr. Sheriff Maconochie. Unfortunately such ignorant decisions have a serious and dangerous effect on the health of infants. Even a Sheriff ought to know that milk is the main food of infants, and that to tamper with it is a very serious evil.

MESSRS. STREET AND Co., Advertising Agents, of 30, Cornhill, E.C. and 5, Serle-street, W.C., announce that, in consequence of their increasing business, and for the convenience of their West End clients, they will open on Monday, 5th April, 1897, a branch establishment at 164, Piccadilly, London, W.

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PROFESSOR DEWAR AND THE CHEMICAL SOCIETY.

THERE appeared, on March 26, a very peculiar letter in the *Chemical News* from Mr. Henry E. Armstrong on behalf of his friend Professor Dewar. Most men of honest convictions and independent thought have, we believe, not in England alone, but throughout the world, weighed and know Professor James Dewar, his distinguished friend, Sir Frederick Abel, and a few other ornaments of science.

It is proposed to make Professor Dewar president of the Chemical Society, and as this proposition has evoked widespread disapproval, Mr. Armstrong has chosen to entirely misconstrue the *raison d'être* of the opposition to Professor Dewar. Mr. Armstrong believes it is inspired from university college. Such a belief is childish. The objections may have something to do with London water analyses, or with views upon Sir Frederick Abel's murderous flashpoint of 73 deg. F. for petroleum, which enables Rockefeller and his gang to send us 40 per cent. refuse oils not allowed to be sold in the United States. The objections may be based on the belief that, however much it may satisfy Rockefeller, it is not good for the health of the men, women, and children of the United Kingdom that a person per day should be roasted alive to suit the curious science of Professor Dewar and the pockets of the Standard Oil gang.

The objections may rise from the fact that Mr. Boverton Redwood and Mr. A. Gordon Salamon support Professor Dewar, or from a host of other facts, but we think that those who have the true interests of science at heart will cordially endorse the appeal to elect Professor William Ramsay, Ph.D., F.R.S., president, and Professor Harold B. Dixon, F.R.S., vice-president. The appeal is supported by: M. A. Adams, C. F. Baker, Chichester A. Bell, Bertram Blount, Charles E. Cassal, Alfred C. Chapman, F. D. Chattaway, J. Norman Collie, H. G. Colman, Arthur W. Crossley, S. F. Dufton, Vaughan Harley, Sydney Harvey, C. T. Kingzett, Stanley Kipping, A. Lapworth, Arthur R. Ling, R. T. Plimpton, H. D. Richmond, H. Lloyd Snape, K. W. Travers, Sydney Young, John Wade.

For our own part we fear Professor Dewar has been very much overworked of late, and that he needs a rest; and a good long one we trust he will take.

AN IMPORTANT SANITARY PROSECUTION.

AT Southwark, on March 25, the Improved Industrial Dwellings Company were summoned by the St. Saviour's District Board of Works, under the Public Health (London) Act for failing to comply with statutory notices to abate a nuisance which was injurious or dangerous to health, in respect of the

insanitary condition of Mowbray-buildings, Redcross-street, Borough. There were eight summonses, applying to eight blocks, comprising 190 tenements.—A year or two ago the defendant company were convicted at this court upon a similar complaint affecting the same premises, but upon appeal to the Quarter Sessions, presided over by Sir Peter Edlin, the conviction was quashed. The present proceedings are therefore the renewal, to some extent, of an old controversy, but the District Board are said to have strengthened their case by evidence recently obtained in the course of two midnight raids upon the buildings for purposes of inspection under the magistrate's warrant.—When Mr. Slade took his seat in the afternoon, however, the application was successfully renewed.—Mr. Frank Dodd, barrister, instructed by Mr. Topham, solicitor to the Board, appeared to prosecute, but Mr. M'Morran, Q.C., who has been retained for the defence, was unavoidably absent, on account of the sudden death of his brother, and upon that ground the hearing was adjourned.

MEAT.

AT Clerkenwell, on March 24, Thomas H. F. Garson, farmer, of New Leake, Lincoln, was summoned by the Holborn Board of Works for depositing at a meat salesman's premises in Charterhouse-street a carcase of mutton which was unfit for human food. Mr. Courthope prosecuted, and Mr. Disney defended. Inspector Billing proved seizing the meat, which was the carcase of a sheep killed in a moribund condition, and which had suffered from an inflammatory disease of the kidneys. The defence set up was that the defendant depended entirely upon his butcher's judgment as to the fitness of the meat for the market. Mr. Bros, after hearing all the evidence, said the defendant had not informed his butcher that the animal had been found dying, and therefore could not put all the responsibility on the butcher. He imposed a fine of £20 and 2s. costs.

GOTTLIEB DAVID LINK, of Canonbury-square, meat salesman, was summoned by the Holborn Board of Works, for depositing at his then premises, 91, Cowcross-street, four quarters of beef which were diseased and unfit for food of man. Mr. Percival Clarke (instructed by Mr. Matthew Hale) prosecuted, and Mr. Ricketts defended. The summons arose out of a previous case against James Blake, of Norwich, for sending up the meat in question. It was seized by Inspector Billing, and in his and Dr. Bond's opinion, was the flesh of an animal which had died a natural death or been killed in a moribund condition. Blake now gave evidence against Link. He said he sent up the meat with a note that it was subject to inspection. This note was written by Link himself in the "Buff Coat," at Norwich, and handed to witness by defendant, who said, "If you are sending any more rough stuff up to London, put this note in, and you will be all right." Cross-examined: He was not sure whether the defendant said "rough stuff" or "plain meat." Defendant, who said he knew nothing of the meat in question, and had always given instructions that no meat was to be offered for sale until after inspection, was committed for trial, bail in £200 being accepted.

ON March 26, James Dion, butcher, of Wormgate, Boston, Lincolnshire, was summoned before Mr. Horace Smith for depositing four quarters of beef at a meat salesman's premises in Charterhouse-street on February 10.—Mr. Hale prosecuted for the Holborn Board of Works, and Inspector Billing proved seizure of the meat.—The condition of the flesh showed that the animal had suffered from tuberculosis in a very advanced stage.—Mr. Moore, who defended, pleaded guilty to sending the meat up, but said it was sent at the invitation of the London salesmen, who sent circulars to farmers asking them to send up anything and they would

dispose of it. This meat was so bad that it was obvious to anyone, and defendant thought it would be used for the kennels.—Mr. Horace Smith said farmers must learn that they must not send bad meat to poison the people of London. The defendant sent this up, careless as to how it was disposed of as long as he got something out of it. He imposed a fine of £20.

At Hull, on March 24, George Ransome, knackerman, Beeford, appeared in answer to a summons for offering for sale on August 10 last the diseased carcase of a heifer. Mr. Duncan (Town Clerk's Department) appeared in support of the information.—Mr. Hohenrein, pork butcher, Waterworks-street, deposed that the defendant offered him the carcase for sale. On seeing it he said to the defendant, "That's no use to me." Defendant said, "What for?" and witness replied, "It's bad meat." The meat was diseased and unfit for human food.—Dr. Mason said that when he saw the carcase it was very emaciated and dropsical. The heart, lungs, and kidneys were diseased, and the carcase was quite unfit for human food. The defendant during the examination used very abusive language to the witness and the whole of the Corporation officials. Evidence was also given by Inspector Cook and others.—Edmund Johnson, of Foston, was one of the witnesses, and deposed to selling the carcase in question to the defendant for 30s.—Mr. Twiss: Why did you kill it? Witness: It appeared to have an affection of the brain, or it might have been sunstroke.—Mr. Twiss: How did you do it? Witness: It fell down, and I ran up with a knife and cut its throat.—Witness, continuing, said that he dressed the carcase, believing it to be fit for human food. He sold it at about 1s. per stone.—Mr. Twiss: One shilling a stone? What was the market value of beef, then? Witness: About 7s. per stone. I was very glad to get rid of it. If there is anything suspicious about beasts farm hands will not eat them. It is customary to kill such beasts to save their lives.—The defendant, who had nothing to say, was committed for trial at the Quarter Sessions, he being allowed bail in his own recognisances in £50.

THE INIQUITOUS FISHMONGERS COMPANY AGAIN.

At the Hull Police Court on March 25, before Mr. E. C. Twiss, Mr. Sydney Tucker, game dealer, Paragon Station, was summoned for exposing four unseasonable salmon for sale. Mr. Humphreys, London, prosecuted on behalf of the Fishmongers' Company, London, and Dr. H. Woodhouse appeared for the defendant.

Detective Wilson said that on October 9th last, in consequence of information he received, he went to the Station Market and there found upon a stand three salmon and one trout. He seized the fish, which was stinking, and asked the defendant for the name of the sender, but he declined to give it, saying that he had wired the sender, and he expected a letter the following morning, and if, he said, he had to give the information he would do so.

Mr. A. Johnson, principal fish meter in the service of the Fishmongers' Company, London, deposed to visiting Hull on October 10 and proceeding to the Parliament-street Police-station. There he saw two female salmon full of ova, one male salmon, and one male sea trout, all thoroughly out of condition. They were evidently netted fish, and were in a stinking condition. They had the appearance of having been out of the water for ten days or a fortnight. He afterwards visited the defendant, who said that he would supply the company with the sender's name if he received permission to do so. Up to the time of the witness leaving London the information had not been received.

Dr. Woodhouse said the defendant admitted he had not sent the information, because he had not got it.

The witness, cross-examined by Dr. Woodhouse,

could not say why the company had delayed taking these proceedings so long. He might have told the defendant they did not want to touch him, but the sender. His object had been to trace the sender, but he had not succeeded in doing so. He had been to Crieff, and ascertained that three hampers, described as containing game, had been consigned to the defendant. He had seen an entry in the North-Eastern Railway Company's book "hamper of fish refused."

By Mr. Humphreys: That was some days afterwards.

Dr. Woodhouse said that on the morning in question, when the hamper was opened and found to contain fish, it was a very great surprise to the defendant, who knew nothing about it. He was simply a dealer in game, and, therefore, to find salmon in one of the hampers was a complete surprise to him. He put it on one side, and upon the arrival of the railway company's official he told him he was going to reject it to the company. That course he pursued. The defendant felt strongly the whole thing had been planted upon him out of malice. His Worship could perhaps, carry his mind back to a case in that Court some time ago, in which a person was convicted for forging a telegram to Crieff. The defendant was the prosecutor in that case, and he was there answering a case where there was a consignment from Crieff.

Mr. Twiss: You suggest it is a plant upon the present defendant out of spite for those previous proceedings?

Dr. Woodhouse: That is what we feel about it. Proceeding, he said that the defendant had not given the company the sender's name, for the simple reason that he did not know it. The prosecution had left no stone unturned to find the sender. They had been hither and thither, and had utterly failed, and yet they wished to turn round on the defendant and say that he could give the information. He said emphatically he could not. He was simply an innocent receiver of a thing that he did not know was coming.

Robert Duffil said that the defendant appeared quite surprised when he found the hamper contained salmon and not rabbits, and he at once went to the foreman's office.

Arthur Cox, employed by the defendant, said that there was a number of rabbits under the salmon. As soon as the defendant saw the fish he ordered him to put them in another hamper. During the eight years he had been with the defendant he had never known him to receive fish except on that one occasion.

Thomas Douthwaite, fish and game foreman in the employ of the North-Eastern Railway Company, deposed to the defendant refusing to accept the salmon.

Dr. Woodhouse argued that the evidence did not disclose the fact that the fish was ever in the possession of the defendant within the meaning of the statute.

Mr. Humphreys said that the argument was about the most untenable one a Court had ever had before it. It was absolutely nonsensical.

His Worship deferred his decision.

LONDON POOR AND THEIR WATER SUPPLY.

At Westminster, on March 25, Thomas Francis Hall, of Deanery Works, Godalming, Surrey, owner of a number of cottages known as Mills-buildings, Greycoat-place, Westminster, answered a summons for neglecting to keep a water-cistern supplying the property in a cleanly and proper state.—Mr. Percy Gates, solicitor to the Westminster Vestry, who prosecuted, said that there were nine cottages, containing 15 families, consisting of 60 people, supplied from one large water tank, which was in a most disgusting state.—Inspector M'Nair produced a bottle filled with a dark greenish liquid, which he declared was a fair sample of the contents of the tank.—Mr. Sheil expressed astonishment that people could drink such

filthy stuff.—Mr. Gates: You can imagine what a lot of disease might result.—Mr. Sheil: Evidently full of filth and microbes. Not fit for any purpose except to poison people.—The defendant said he had not received any complaints. The moment he knew of the matter he had the tank covered in.—Mr. Sheil fined him 40s. and costs.

MARGARINE.

At Leeds on March 24, a hawker named Robert Butler, of 9, Mary-street, Sweet-street, Holbeck, was summoned for having exposed margarine for sale without a label. Mr. Jolliffe (Deputy Town Clerk), who prosecuted, stated that on Saturday last Mr. W. B. Walker, Food and Drugs Inspector for Leeds, saw defendant offering for sale, without label, stuff resembling butter, but which contained 86 per cent. of foreign fat. A fine of 40s. was imposed, the alternative being one month's imprisonment.

On March 26, Fred Barraclough, provision dealer, of 26, Royal-road, Hunslet Carr, was charged with selling to Mr. W. B. Walker, the Food and Drugs Inspector, a pound of butter which, upon being analysed, was certified to contain 71 per cent. of foreign fat, the commodity not being labelled as margarine. The defendant had been fined £5 for a similar offence.

The Stipendiary characterised the case as one of the worst that had been brought before him and fined the defendant £10.

At Kirkcaldy, on March 25, seven local grocers were charged, at the instance of the Sanitary Inspector, with failing to comply with the statutory obligations relative to the retailing of margarine. Two of the cases went to proof, all the respondents denying any intention of fraudulency, and pleaded that the ticket had fallen down or been removed by accident, while some pleaded ignorance. His Lordship said he had come to the conclusion that the Act did not require the prosecutor to prove fraudulent intentions, and he did not believe that there had been any fraudulent intention in any of the cases, although there had been a little bit of carelessness displayed. The Act, however, did not allow of excuse. It was the duty of the seller to see that this label was attached to the margarine, and if once they admitted excuses there would be no end to it. He imposed a fine of £2 in one case, and £1 each in the other cases.

WATERED GLYCERINE.

At Castle Eden Petty Sessions, before Major Burdon (in the chair), the Rev. R. Taylor, Mr. W. H. Fisher, and Mr. W. Armstrong, the case, adjourned from the previous sitting, in which Joseph Luxmore, grocer, etc., of Wingate, was charged with selling glycerine containing 13 per cent. of water in excess, was again gone into.

Mr. B. Scott Elder, Chief Inspector under the Food and Drugs Act, briefly reviewed the evidence given at the last Court, which was to the effect that his assistant bought half-a-dozen penny bottles of glycerine at Luxmore's shop and sent a sample of this to the analyst, who certified that it contained 13 per cent. of water in excess. Mr. Elder added that this glycerine was being sold at twice the cost of the ordinary glycerine. They were, he continued, not contesting the retail dealer. It was the wholesale people they were dealing with. Therefore, he asked them whether an ordinary penalty on the retailer would be sufficient to meet what he called an extraordinary case.

After evidence had been led and Mr. Horner, of Stockton, who appeared for the defence, had addressed the Court, Mrs. Luxmore gave formal evidence in defence.

Mr. Elder (cross-examining): The wholesale people

have given you some guarantee that they will pay all your costs?

Mrs. Luxmore: Yes.

Then the wholesale people are really defending?—Yes.

And my friend (Mr. Horner) appears for the wholesale people as well as for you?—Yes.

A fine of £3 and £2 2s. costs was imposed.

MILK.

At North London, on March 26, Henry Webb, a milk dealer, of Chapman-road, Hackney-wick, was summoned at the instance of the Poplar Board of Works, for selling milk which contained 36 per cent. of added water.—The defendant pleaded guilty, and added, "I bought it bad and made it worse. I work in a poor neighbourhood, and not much trade is done."—Mr. Cluer: It is to be hoped you will do no trade at all if you sell stuff like this.—The defendant said that he had been on the same round eight years, and had never been summoned before.—Mr. Cluer said he saw no extenuating circumstances. He fined the defendant £5 and costs.

At Farnham Petty Sessions, Fredk. Stovold, farmer Broomleaf Farm, Farnham, was summoned for selling adulterated milk, on March 5.—Mr. Cliffe, County Council Inspector, said he stopped the defendant's man in West-street, and purchased a pint of new milk. Witness put in the certificate from the analyst, showing one gallon of water to six of milk.—The defendant said his man admitted the next morning having added water as he had had a misfortune, and the man was dismissed.—Alfred Miller then pleaded guilty to selling adulterated milk.—The defendant said he was left in sole charge of the cows and milk on the afternoon of the day in question, and had the misfortune to have some milk—about four quarts—kicked over. He added a little water. He exonerated Mr. Stovold, of whom he spoke in high praise, and said he was sorry he had done it.—Fined 10s. and costs.—With regard to the case against Stovold, the Inspector said he would like to withdraw the summons.—The Bench acceded to the request.

At Liverpool, on March 24, Ellen Hodson, milk-dealer, of 61, Bamber-street, was summoned for selling as new, milk which, upon analysis, was found to consist of 10 parts of water to every 100 parts of the poorest milk. The defendant did not appear, but was represented by an employee. Mr. Stewart remarked that he had received a letter from the defendant, in which she said she was very sorry to have received the summons, and thought she had better tell the truth at once. She did add a little water to every gallon of milk, in order to cover the over-measure and enable her to complete her payments (laughter). The defendant's employee, addressing the magistrate, said that milk in water was very dear.—Mr. Stewart: And water is very cheap. Proceeding to read the letter, he said that the defendant seemed to have had a good deal of illness and trouble. She would be fined 20s. and costs making £1 15s. in all.

SPIRITS.

At Kingston, Karl J. Bischoff, Foley Arms, Claygate, was summoned at the instance of Robert Houghton, an inspector under the Surrey County Council, for having on the 10th ult. sold gin which was adulterated with 4½ per cent. of water over and above that contained in 35 degrees under proof, and which was not of the nature and substance demanded.—Walter Tyler, Inspector of Weights and Measures under the Middlesex County Council, said that at the request of Inspector Houghton he purchased half-a-pint of gin from the defendant, for which he paid 1s. Defendant served witness, and he

then handed the bottle over to Mr. Houghton.—Robert Houghton said that he received the sample from the last witness. He told defendant it was purchased for the purpose of analysis, and offered to divide it into three portions. Defendant accepted the offer. The analyst had certified that the gin was adulterated.—Defendant said he had been in the trade twenty years, and had never been summoned before.—The Bench imposed a fine of £2 including costs, the Chairman remarking that that was a low sum.—Hugh Ettrick Saunders, of the Bear Hotel, Esher, was summoned at the instance of Robert Houghton, an inspector under the Surrey County Council, for selling Scotch whisky which was adulterated with $2\frac{1}{2}$ per cent. of water over and above that contained in 25 degrees under proof whisky, on March 10.—Inspector Houghton stated that he purchased half-a-pint of whisky at the Bear Hotel, for which he paid 1s. 4d. He told the barmaid the whisky was being purchased for the purpose of analysis, and witness asked Mr. Saunders if he would have it divided. He replied that he did not want the sample. The public analyst had since certified that the whisky was adulterated.—Mr. Burgoyne Watts, solicitor, who defended, said he was not in a position to dispute the facts. The whisky was only $2\frac{1}{2}$ per cent. below proof.—The Chairman: Yes, $2\frac{1}{2}$ per cent. in addition to the 25 allowed.—Mr. Watts further stated that Mr. Saunders bought his whisky from Dewar's, and supplied it exactly as he received it from the distillers.—The Chairman remarked that that was a question for Mr. Saunders and the distillers. Defendant would be fined £2 including costs.

GINGER.

At Liverpool, on March 23, Martin Brown, grocer, King-street, Garston, was summoned for selling adulterated ginger. Inspector M'Keand stated that he had purchased the ginger, and the analysis showed that it contained 25 per cent. of ginger which had been deprived of a portion of its valuable flavouring qualities. Only 75 per cent. of the whole was genuine. The defendant had in his possession a guarantee from a firm in Dublin, from whom he bought the ginger, to the effect that it was genuine.—The bench directed the defendant to pay the cost of the summons, including the fee of the analyst. Defendant, said the chairman, would be able to recoup himself from the Dublin firm from whom he purchased the ginger. Mr. Snape hoped the police would be able to take action against the persons who had given the guarantee, which had been contradicted by the analyst and the evidence.

PUBLICANS AND THE WEIGHTS AND MEASURES ACT.

At the Jarrow Police-court, on March 25, John Rutherford, an innkeeper, was charged under Section 29 of the Weights and Measures Act with serving a pint of liquor in an unstamped measure. Mr. J. O. Davidson defended, and Mr. James Laidlaw, the inspector, prosecuted on behalf of the County Council.

James Laidlaw, Inspector of Weights and Measures for Chester District of the County of Durham, deposed that on the 23rd ult., he visited the Turf Hotel. He saw a barman, and asked for a pint of mixed beer, and this was served in a measure (produced), and then put into a can which he had. He paid for it, and then saw the measure, and found it to be unstamped. He told the barman, and the manager, Mr. James Traynor, what was the matter, and then left.

By Mr. Davidson: The measure held more than a pint; he had no objection on that score. He swore that the beer was drawn direct from the pump into the

measure produced. The barman had told him they had imperial measures, but used the above for the outdoor trade.

Mr. Davidson then asked for the Inspector's authority for entering the house, and it was produced.

For the defence, Mr. Davidson contended that the proceedings had been taken under the wrong Act. He quoted a case bearing on the point. He then submitted that the measure was not used as an imperial measure, but that the beer was drawn first in an imperial measure, and then transferred to the other for the sake of giving the outdoor trade the extra sup they expected. He contended that there was no attempt to defraud. He also submitted that the measures were used contrary to the instructions of Mr. Rutherford. He quoted cases to show that on a servant acting contrary to his master's instructions the master was not liable.

James Traynor gave evidence to the effect that he used the measure contrary to instructions, as a check on his stock.

John A. Lee corroborated the last witness's statement, and stated that the measures were always used as Mr. Davidson had explained.

This closed the case for the defence.

Mr. Mabane then asked that the decision in the present case should apply to the one he was engaged in, and against Jno. Ewen McPherson, which was almost identical.

Mr. Laidlaw agreed.

The Bench, after a consultation, intimated that they would deliver judgment this day month.

After a consultation among the defending solicitors and Mr. Laidlaw, an application was made to the Bench to dismiss the case with costs against the defendants.

This was done, the measures being forfeited and the practice to be discontinued.

AMERICAN BACON AS IRISH.

BEFORE the Borough magistrates, at Shrewsbury, Richard Rowlands, provision dealer and grocer, of Meadow-place, Shrewsbury, was charged with selling American rolled bacon as Irish rolled bacon; and Samuel Leighton, his boy assistant, was similarly charged. The prosecution was instituted by the Ham and Bacon Curers' Association of Great Britain and Ireland, for whom Mr. B. Weekes, of Birmingham, appeared. Mr. F. W. Williams represented the defendants, and pleaded not guilty on their behalf. John Moore, an inspector for the association, said he went to the defendant's shop on January 14, and asked the defendant Leighton for a piece of Irish rolled bacon. Leighton took up some bacon from the window, and witness asked if it was Irish. Leighton replied that it was, and that the price was 5d. per pound. Witness bought it, and it came to 1s. 9d. He requested that a bill and receipt should be supplied, and the boy at first wrote "rolled bacon" only, but at the request of witness added "Irish" rolled. The piece of bacon he received was American. It was a piece from the end, and was not worth more than $3\frac{1}{2}$ d. per pound, the inner cuts being saleable at 1d. per pound more.—Cross-questioned, the witness said there was no bacon in the shop marked "Irish," and upon the bacon he purchased there was no mark whatever.—Two police officers corroborated the Inspector's story, and Robert James Thompson, a Belfast bacon curer, deposed that the piece sold to Moore was American.—Mr. Williams, in defence, stated that Mr. Rowlands himself knew nothing whatever of the transaction, and said advantage had been taken of the boy being in the shop alone to make the purchase. When the boy made out the first bill he did not describe the bacon as Irish. That was not done until Mr. Moore pressed him to do it.—On the advice of Mr.

Williams, Leighton pleaded guilty, and was ordered to pay the costs in his own case, while Rowlands was fined £2 and costs.

DEATH FROM TINNED HERRINGS.

MR. F. W. BUTLER held an inquest at Nyetimber Cottage, West Chilton, touching the death of Alice Elizabeth Short, aged 17.—William Alfred Short, carter, father of the deceased, stated that she became sick, retched all night, complaining of a pain in the chest, and died at five o'clock next morning. He said the children, including the deceased, had some pickled herrings at tea, they were tinned herrings, and had been bought at a shop in the village. They all ate of them, but only the deceased was taken ill.—The jury returned a verdict that death was due to syncope, brought about by retching, which was due to the condition of the stomach, caused by the action of an irritant poison having been taken in fish by misadventure.

BEER.

At Lambeth, on March 29, George Lawes, landlord of the Cooper's Arms public-house, Bird in Bush-road, Peckham, was summoned by the Excise authorities for diluting beer.—Mr. Dennis supported the summons, and Mr. H. I. Sydney defended.—On December 28, Mr. J. B. Davis, a supervisor of Excise, accompanied by Mr. Ganderton, another Excise officer, visited the defendant's house and took two samples of beer from the cellar. Upon analysis at Somerset House one of the samples proved correct, but the other sample was alleged to show a dilution equivalent to the addition of 2½ gallons of water to the barrel of 36 gallons.—The defence raised was that the barrel from which the sample complained of was taken consisted of waste, and was not intended for sale.—In cross-examination by Mr. Sydney, both Mr. Davis and Mr. Ganderton denied that they were told that the barrel contained waste.—Mr. Hopkins declined to accept the defence, and ordered the defendant to pay a penalty of £5 and costs.—Walter Billers, a beer retailer, of Hill-street, Peckham, was also summoned for diluting beer.—The defendant admitted the offence, but pleaded that the house was not paying expenses.—Mr. Hopkins ordered him to pay a penalty of £20.

ENCOURAGEMENT OF ADULTERATION.

A LETTER has been sent by the Clerkenwell Vestry to other vestries calling attention to the smallness of the fines imposed by police magistrates upon defendants summoned for offences under the Food and Drugs Act. Recently a fine of 6d. was imposed upon a defendant who had been previously convicted four times. The Vestry proposed to petition the Home Secretary, with a view to prevent what practically amounted to an encouragement of adulteration.

ADULTERATED VINEGAR.

MARY MORGAN, an aged woman carrying on business as a grocer, at Rhydfelen, appeared before Mr. Hunter and Mr. James Roberts, at the Pontypridd Police Court, on March 24, charged with selling adulterated vinegar. The defendant, who spoke in Welsh, told the Bench that she purchased the vinegar from a London firm; she thought it thinking it was the best vinegar. She had done absolutely nothing with the vinegar. It was exactly in the same condition now as when she received it. The Bench sympathised with the defendant, and regretted that they were compelled to order her to pay

the costs incurred by the county, amounting to £1 10s. She, however, could recover that amount from the firm she bought the vinegar from.

THE SANITARY INSTITUTE.

A SESSIONAL meeting of the Institute will be held at the Parkes Museum, Margaret-street, W., on April 7, when a discussion will be opened by Henry R. Kenwood, M.B., D.P.H., F.C.S., Medical Officer of Health for Stoke Newington, on "Notification of Measles." The following gentlemen have expressed their intention to take part in the discussion:—Prof. W. H. Corfield, M.A., M.D.Oxon., F.R.C.P., H. E. Armstrong, D.Hy., M.R.C.S., L. W. Darra Mair, M.D., D.P.H., Prof. A. Bostock Hill, M.D., D.P.H., Arthur Newsholme, M.D., D.P.H., Louis C. Parkes, M.D., D.P.H., Francis Vacher, F.R.C.S., M.R.C.P. The chair will be taken at 8 p.m., by E. B. Forman, M.D., M.R.C.P., M.R.C.S., Chairman of the Public Health Committee of the London County Council. Tickets for the admission of visitors may be had on application to the Secretary. The Autumn Congress and Exhibition of the Institute will be held this year in Leeds, in September. The Council will be glad to receive as soon as possible any offers of papers for reading at the meeting from the members or associates.

SANITARY INSPECTORS ASSOCIATION.

THE next general meeting of the members of the Sanitary Inspectors Association will be held at Carpenters' Hall, London Wall, E.C., on Saturday, April, 3, 1897, at 6 p.m., when the Right Hon. Charles Seale-Hayne, M.P., will be nominated for election as Honorary Member. Paper on "Some Nuisances from certain Offensive Trades," by Mr. T. W. Crocker (West Ham). General business, after which the usual Conference will be held, at which Mr. T. G. Dee will bring before the members the subject of the Tenure of Office of Sanitary Inspectors and Inspectors of Nuisances of which he has given notice.

THE "PRODUCE MARKETS REVIEW" ON THE ADULTERATION QUESTION.

THE opinions of the *Produce Market Review* upon questions affecting the trade always merit careful consideration, inasmuch as they are the outcome of long experience and close observation. Our contemporary entertains the following beliefs:—

THE ADULTERATION QUESTION.

"It appears probable that the question of the adulteration of food will be, in some form, dealt with in the coming session of Parliament, in pursuance of the Report of the Select Committee of the House of Commons of July 9, 1896. The general tendency of the changes proposed by that Committee is excellent, and although some of the recommendations are weaker than might have been hoped, still they recommend what would amount to a very great step towards putting down adulteration. The changes they propose are most valuable in detail, and can best be judged by the Report itself, instead of by the summary published in the newspapers. The Blue Book can be had (price 2s. 5½d.) of Messrs. Eyre and Spottiswoode, East Harding-street, City, and as it contains last session's evidence as well as the Report it should be bought for reference by all interested. The Committee recommend excellent provisions concerning the qualifications, remuneration, and supervision of public analysts, and in the way of imposing some form of inspection to

see that local authorities carry out their duties. A very valuable proposal is made to appoint a court of reference, which should have the power to fix standards of purity in food. There are also powers proposed to be given to the Customs to examine goods on import. Considerable improvement is suggested in the detailed methods of procedure. Increased fines and imprisonment are proposed to be levied on offenders, and the new Act is to extend to articles used in the preparation of food or entering into its constitution, so that the absurd decision in the case of baking powder could no longer be repeated. A wide departure from the existing law is the proposal to make the invoice a warranty, subject to certain needful conditions. All these points are excellent, and if they were carried into law, they might be fairly accepted as a step which would be a great help towards properly dealing with adulteration.

"While the general purport of the Report is thus extremely satisfactory, there are some details which appear to want further consideration. In dealing with the question of admixtures with coffee, mustard, and cocoa, the Committee do not see their way to recommend any declaration on the labels of the proportion of admixtures. If Parliament decides still to leave such liberty in the case of these particular commodities, it should surely be coupled with a provision that the names of coffee, mustard, and cocoa should not be applied to commodities which contain more than, say, 50 per cent. of foreign constituents. If the proposed court of reference, as to standards for food, were authorised to proscribe nomenclature as well, this point might be met.

"With reference to the question of invoices constituting a warranty that goods are as they purport to be, the proposed provisions, subject to the qualifications of the Committee, appear to be excellent. It is obvious, however, that if the invoice of a wholesale dealer is to be a warranty to his retail customer, the same provision must extend to all invoices, for the wholesaler in turn would require protection as against the importer, manufacturer, or broker, who might supply him. Further, there should be no possibility of contracting out of a liability of the sort, and the warranty of an invoice should not be overridden by any conditions of sale, or otherwise. In attempting to throw the liability for adulteration on to those who have been the real offenders of late years, namely, the wholesale dealers and manufacturers, it is to be regretted that more stringent provisions are not proposed by the Committee. The fines appear to be insufficient, though a considerably larger scale is proposed than is at present current, and the Committee do not propose to give the power of seizing adulterated goods in bulk, which would have been the most effectual means of stopping adulteration.

"In the case of butter and margarine, the Committee make recommendations which appear to verge upon protection against foreign competition, instead of only giving protection against adulteration. It is proposed that the admixture of butter with margarine should in all cases be prohibited, whether the substances be sold as margarine or not. In no case is margarine to be coloured, but it is to be left in its natural condition, while butter may continue to be coloured. It seems to be a pity to mix up a question which may lead to such acrimonious discussion, as to the protection or otherwise of a native industry, with a question dealing with adulteration. Margarine in itself appears to be a perfectly legitimate and wholesome article, and so long as the public know what they are buying, there can be no reason why they should be shut out from a cheap supply of food, or that it should be made to appear uninviting with a view to protect our home agriculturists. If the admixture of butter with margarine be prohibited, even when the admixture is sold under the name of margarine, the British Colonial coffee planters might far more reasonably ask for protection against the gross frauds which so materially injure their business. It appears unfair

to prohibit admixtures with any one article, such as butter, and not at the same time to extend similar provisions to other commodities.

"The Committee, on page viii. of the report, state that there is reason to believe that a considerable proportion of the imports of food are adulterated, and quote as an illustration the recent examination of 890 samples of butter by the Customs, of which 106 were found to be adulterated. This illustration does not bear out such a sweeping assertion, for the imports of food into the country are between 14,000,000 and 15,000,000 tons a year, while those of butter are only 150,000 tons, or, say, 10 per cent. of the whole. As to the butter imports alone, it by no means follows that a few samples, out of so great a total, represent an average amount of adulteration throughout so heavy a weight; still less does it prove that the same proportion would apply to other articles of food. The Committee go on to suggest that, without detaining the goods, the Customs should take samples of all food products for analysis. This suggestion is by no means based on the evidence of the Chairman of the Customs, who simply stated that his officers could, without any great difficulty, take samples of food products for reference (not analysis). The analysis of a sample from every parcel of food imported would be absolutely impracticable, for the 14,000,000 or 15,000,000 tons imported in a year represent possibly twenty times as many parcels, and, if each package was to be sampled perhaps 300,000,000 samples a year. Such a task as analysing these would be beyond the power of any possible Government Laboratory, which could not reasonably be expected to tackle at the outside more than a few dozens a day. It might be arranged to authorise the Customs to take reasonable samples when the officers saw fit, and to have them analysed now and again in cases of suspicion, or where they thought it desirable or necessary. Beyond this nothing could be done that would not bring the whole thing to a standstill."

PRESERVATIVES IN FOOD PRODUCTS.

By PROF. E. H. S. BAILEY, PH.D.

DURING the past few years a great advance has been made in the methods for the preservation of food. When we compare our circumstances with those of the people of this country a hundred years ago, we begin to realise how great has been that advancement. While they were dependent for their food-supply very largely, at each season of the year, upon the fruits and vegetables of that season, and in every latitude upon the produce of that latitude, and everywhere were dependent upon the local market for fresh supplies of meat and fish, to-day, on account of the methods of preservation that our industry has proven to be effective, the fruits of one season are at our disposal throughout the year, what is produced in one latitude is a food supply for another, and canned meats and fish are in such common use that we have ceased to regard times and seasons.

The methods employed to bring about this change are very numerous. The inventor has taken into consideration the fact that a high temperature and exposure to air, especially to moist air, assist in the decomposition of organic matter, and he has sought to eliminate in various ways the causes of decay. If high temperature is an unfavourable condition, by the construction of cold-storage warehouses and refrigerator cars this condition is counteracted. If moist air is objectionable, then the organic material may be dried at a high temperature, and if kept in air that is reasonably free from moisture it will not decay. If air, laden as it is with the germs that are so prone to find a favourable soil in vegetable or animal food material, can be excluded completely from contact with this material, the problem is solved, and we have the immense canning industry of the present as the outgrowth of that idea. Among the

minor methods for preservation of food may be mentioned the pickling in solutions of salt and salt-petre, the preserving in strong solutions of sugar, and the covering with a layer of fat or oil to completely exclude the air.

Notwithstanding all these methods, there has seemed to some to be a necessity for a more rapid and inexpensive method for the preservation of foods and beverages, and this has led to the use of various chemicals known as "preservatives." This industry has grown up within the past ten or fifteen years, and has begun to attract considerable attention both in this country and abroad. The common preservatives used are sulphurous acid and sodium sulphite, boric acid and boroglyceride, borax, benzoic acid, salicylic acid, saccharine, and beta-hydro-naphthol.

From experiments by Miguel it has been learned that the smallest quantity of boric acid that will prevent putrefaction in neutralised bouillon is 7.5 per cent., and the smallest quantity of salicylic acid is 10 per cent.

That these preservatives are in extensive use is evident from the large number of formulas that are offered for sale, and from items in the "Household" department of popular journals recommending the use of "salix" or borax or some other simple substitute as a preservative, in lieu of the laborious work of canning. It has been noticed by manufacturers, also, that the high temperature and prolonged boiling necessary to preserve some kinds of fruits cause them to fall to pieces and injure their appearance; and on this account they have, in some cases, substituted a comparatively low temperature for the prolonged boiling, and have added some of the preservatives noted above to destroy the vegetable ferments.

Probably these methods of preservation were earlier applied to beverages than to canned goods. This is especially true of milk, wine, beer, and cider. In their investigations upon foods and beverages, the attention of the U. S. Department of Agriculture has been directed to the addition of preservatives to food, and they have contributed much valuable material to our knowledge of the subject.

It is a well-known fact that milk is often falsified by the addition of sodium carbonate, which, of course, neutralises the acidity, but rather favours than hinders the growth of bacteria. It gives the milk a peculiar taste, and, as it enables the dealer to sell sour milk for sweet, it is a fraud upon the public. In addition to this, the continual use of alkaline milk, especially by young and delicate children, who so often depend largely upon it for nourishment, cannot but be detrimental to health.

Salicylic acid is the common preservative, in this country, for beer and cider. Some experiments were made in the laboratory of the State University with a view to determining how much of this acid was necessary to stop the action of ferments in cider. The sample of cider used was distilled and found to be perfectly fresh and free from alcohol; then several por-

tions of it, of a litre each, were treated with different quantities of salicylic acid, and after ten days, and again after twenty days, examined for alcohol. It was found that one part of salicylic acid in 10,000 was of little value in arresting or preventing fermentation; one part in 4,000 had a decided effect in decreasing the amount of alcohol that otherwise would have been formed; and one part in 2,000 limited the alcoholic fermentation so that there was less than one-half of 1 per cent.; and, finally, a proportion of one part in 1,000 practically prevented fermentation. In some published receipts for the preservation of fruits it is recommended to use 30 grains to the quart, or about one part in 500. According to the experiments above noted, this would seem to be excessive.

Most countries have prohibited the use of benzoic acid as a food preservative, and the use of saccharine for this purpose has been prohibited in France, Germany, and Belgium. In some cases the use of these preservatives for foods or beverages intended for export has been allowed, while it has been prohibited in those intended for home consumption.

An elaborate series of experiments upon the effect of preservatives was made by Leffman and Beam several years ago, and as a conclusion they state that: "Salicylic acid prevents the conversion of starch into sugar under the influence of either diastase or pancreatic extract, but does not very seriously interfere with peptic or pancreatic digestion of albumen. Saccharine holds about the same relation as salicylic acid. Sodium acid sulphite and boric acid are practically without retarding effect. Beta-naphthol interferes decidedly with the formation of sugar by diastase, but not with the action of pancreatic extract on starch. Peptic and pancreatic digestion of albuminoids was almost prevented by this agent."

The consensus of opinion of chemists and physiologists, both in this country and abroad, seems to be that, although it may not be wise to prohibit the use of preservatives in foods and beverages, yet, from what we know of their action on the system, manufacturers of such substances should be required to state in plain terms that the packages contain such preservatives, and in what proportion they are present; then if the purchaser chooses to use the goods, or if his physician believes they will not injure him, he is at liberty to make use of them. Although in certain cases it has no doubt been proven that persons were injured by the use of preservatives in food, yet the cases are not numerous enough to warrant a wholesale condemnation of the preservatives. The strongest argument that can be presented against their use, and the one in fact that appeals to common sense, is this: Substances that will prevent decomposition and fermentation in the foods themselves, will, if taken into the system with the foods, retard the action of the digestive ferments on the food, and consequently *must* tend to produce indigestion.—*Bulletin of Pharmacy.*

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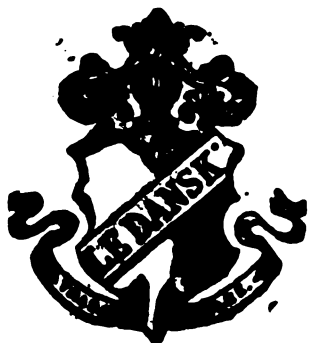
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W.
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Food & Sanitation

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Food and Sanitation.

SATURDAY, APRIL 10TH, 1897.

THE TUBERCULOSIS QUESTION.

THE French Shorthorn Society and the French Minister for Agriculture have had enough of the methods of our lordly breeders of cattle. Our butchers suffer, without any effective defensive action, each this or that to palm off upon them tuberculous cattle, causing the butcher loss of reputation and money.

They manage these things better in France. M. De Clerq, President of the French Shorthorn Society,

has, on behalf of that society, officially informed the Shorthorn Society of Great Britain that until English sales are conducted on fair lines the French society will buy no more cattle from England. M. De Clerq says his society has asked of the English society that cattle before purchase should be subjected to the tuberculin test, but in vain.

The last straw appears to have been put on in the case of a bull stated to have been raised by Lord Feversham, which Professor Nocard declared was absolutely tuberculous. On being killed it was found in a very advanced stage of the disease. Another animal bought from Lord Polworth turned out to be in a similar condition, and this prize animal had also to be slaughtered. As neither of these noble cattle salesmen have refunded the value of these beasts, M. de Clerq has announced in a letter to the *Times* that under the existing unsatisfactory state of "Heads I win, tails you lose" things practised by our high and mighty breeders they can keep their diseased animals so far as French buyers are concerned; and in this action the French Society will have the approval of all right thinking people. Our butchers might take a lesson from this. A united agreement that no beasts shall be bought without a warranty, would soon bring that fatuous person, Mr. Chaplin, and his clique to their senses. The butchers are under no necessity to be slaves to the injustice. If they combined they could be masters of the situation.

PROTECTING THE POOR IN ROTHERHITHE.

WE are glad to notice that Rotherhithe is looking after the interest of the poor.

The other day Mr. Henry M. Cockburn, Sanitary Inspector, had the following cases before Mr. Fenwick at Greenwich Police Court:—

JOHNATHAN W. JONES, 203, Rotherhithe New-road, cocoa adulterated with 35 per cent. sugar and 50 per cent. sago starch. First offence, fined £3 and 12s. 6d. costs.

J. STIBBONS, 4, Warndon-street, Rotherhithe, coffee adulterated with 85 per cent. chicory. First offence, £3 and 12s. 6d. costs.

WILLIAM WITHERS, 69, Rotherhithe New-road, cocoa adulterated with 35 per cent. sugar and 50 per cent. sago starch. First offence, fined £3 and 12s. 6d. costs.

GEO. GREEN, 61, Hawkestone-road, Rotherhithe, cocoa adulterated with 35 per cent. sugar and 50 per cent. sago starch. First offence, fined £3 and 12s. 6d. costs.

JOHN GOODLEY, 211, Rotherhithe New-road, butter adulterated with 70 per cent. margarine. First offence, fined £3 and 12s. 6d. costs.

WILLIAM WITHERS, 69, Rotherhithe New-road, selling margarine not labelled. First offence, fined £3 and 12s. 6d. costs.

Mr. Fenwick said poor people must be protected, and complimented the inspector.

GINGER-BREAD PLUS 80 GRAINS OF ALUM PER POUND.

AT Pontypridd Police-court, on March 24 (before Mr. Stipendiary Williams and other magistrates), David Lewis, baker, of Pontrhondra, was summoned for keeping an unjust scales to weigh bread.—Superintendent Jones said that he found in the defendant's coat a saltern scale, which indicated a quarter against the buyer.—Fined 10s.—John S. Griffiths, a small shop-keeper, of Clydach Vale, was summoned for selling

adulterated cake.—Mr. W. Roberts-Rosser, solicitor, Pontypridd, defended.—Superintendent Jones visited the defendant's shop on February 23, and purchased 1 lb. of "brown" cake, commonly known as "ginger-bread," for which he paid sixpence. He forwarded it to the public analyst, whose report showed that the sample contained a mixture of alumina compounds, derived from the addition of alum, and equivalent to 80 grains of alum per pound, and he (the analyst) was of the opinion that such admixtures were injurious to health.—Mr. Rosser asked the bench to deal leniently with the defendant, who had for the last ten years bought the cake from the same man in Pontypridd Market.—The defendant was fined the costs, £1 11s. 6d.

SPIRITS.

AT Wotton-under-Edge Petty Sessions, on April 2, Joseph Saywood, Falcon Hotel, was summoned under the Food and Drugs Act for selling Scotch whisky 42·2 per cent. under the proper standard, instead of only 25 per cent. P. C. Edward Jenkins, an inspector under the Food and Drugs Act, gave evidence as to purchasing the whisky on the 8th ult. for the purpose of having it analysed. The witness handed in the certificate of the public analyst, which stated that the whisky was below proof as above stated, caused by the addition of water. Defendant said he had had the whisky for a long time, he not having much sale for Scotch whisky. Fined £1 and 19s. 9d. costs.

AT Rotherham, the landlord of the Ball Inn, Whiston (Mr. Arthur Foers), was summoned for selling to Mr. Joseph Wilson, an Inspector of Food and Drugs for the West Riding County Council, a quantity of whisky which was adulterated with an excess of water by 11·2 parts.—The defendant pleaded guilty.—Mr. Wilson said he visited Whiston on February 12 for the purpose of taking samples, and he purchased at the defendant's house half-a-pint of whisky, for which he paid 1s. 3d. He divided it into three parts, according to the Act of Parliament. The analyst's certificate stated that the sample was 33·4 degrees under proof, instead of 25 per cent., as allowed by law.—The defendant pleaded there had been a mistake, but he did not know how it happened. He mixed the spirits up himself as a rule, and thought that perhaps in this instance his wife might have meddled with it. The inspector had called several times, and had sampled the whisky, and told him it was extra good. This sample seemed to have been inferior.—The Chairman said as the whisky had been tried before and found to be right, the defendant would only be fined 1s. and costs.

AT Sheffield City Police-court, on March 30, Mr. Joseph Wilson, Inspector of Food and Drugs, prosecuted in two cases against publicans for selling adulterated spirit. The first was against Henry Dicker, landlord of the Turf Tavern, Handsworth, for selling a half-pint of gin which was found to be 39·2 under proof, instead of 35; the excess of water 6·4 parts.—The case was proved by the certificate of the analyst, Mr. Allen.—A fine of 10s. including costs was imposed.—The next case was against George Gray, of the Norfolk Hotel, Handsworth.—The sample of whisky which was purchased from him proved to be 29·6 under proof, instead of 25; there was an excess of water of 6·1.—Inspector Wilson proved the cases, and the defendant, who said his hydrometer was broken, was fined 10s. including costs.—Both offences were on February 19.

DRUGS.

A TYLORSTOWN chemist, named William Rees Williams, was charged last week with selling adul-

terated tincture of belladonna.—Inspector Jones, deputy Chief Constable, said that he bought a quantity of belladonna at defendant's shop. He informed defendant that he bought it for analysing purposes. On the 21st the analyst returned a certificate showing that the drug was not of a certain purity. It was 33 deg. under proof, and was not made of the best English leaf.—Replying to the Stipendiary, the chemist said that the drug had been in his shop for the last three years. He hardly ever sold it in retail except in cases when it was used in medicine.—Dr. Hunter: If a medical man ordered belladonna he would expect certain results from it. You cannot expect the same result from an article that is not pure. You don't make it, do you?—Defendant: No, sir; I buy it.—The Stipendiary: Up to the proper standard?—Dr. Hunter queried as to where he kept the drug, and defendant replied that it was at the top of the shelf. The defendant was advised to keep the drug in small quantities, so that it might be fresh.—He was ordered to pay the costs of the case, 30s. 6d.

A FERNDALE chemist, named Robert Rogers, was summoned for selling adulterated nitrous ether.—Mr. James Phillips, Pontypridd, defended.—P.C. Cole said that on the 2nd inst. he purchased a quantity of nitrous ether at defendant's shop, and forwarded the same to Superintendent Jones.—The Chief Deputy Constable deposed to having sent the sample to the County Analyst. On the 18th he received the certificate of analysis, showing that there was 27 per cent. deficient of nitrous ether, with 3 per cent. of volume of water in excess of the prescribed quantity.—Mr. Phillips addressed the Bench at some length, and argued that every time the bottle was opened part of the contents evaporated, and the purity was lessened.—Defendant was ordered to pay the costs of the case, 30s. 6d.

COCOA.

AT Malling, on March 22, Frederick Carlow, grocer, of Wrotham Heath, was summoned by Superintendent Hoare for selling adulterated cocoa on January 29.—P.C. Bran was the purchaser, and the case for the prosecution was that the cocoa, which was sold at the rate of 6d. per lb., contained 50 parts of cocoa and 50 parts of sugar and foreign starch.—Mr. Hood, of London, who defended by direction of Messrs. Fry, cocoa manufacturers, submitted that as P.C. Bran and not the Superintendent was the purchaser of the article the prosecution should have been instituted by the constable. The Chairman (to the Superintendent): May we take it that you didn't instruct the constable to go to that particular shop?—Superintendent Hoare: No, sir.—Mr. Hood: The Act distinctly says that the person who purchases must institute the proceedings. If the superintendent had instructed Bran to purchase the cocoa it would have been a different thing.—After a deliberation in private, the Chairman said the summons would be dismissed on the point of law raised by Mr. Hood.—Mr. Hood: The Act is full of technicalities, and I am bound to take advantage of omissions of this kind. I should like to say, however, that I have a perfect answer to the case on its merits, and I hope your worships will allow me to make an explanation.—The Chairman: We will take it for granted that you have a very good answer to the case.—An application by Mr. Hood for costs was refused.

MUSTARD.

JOHN HANKIN, grocer, Window-lane, Garston, was summoned for having supplied mustard which was not of the quality sought by the buyer. Superintendent Keighley supported the information, which was laid under the Food and Drugs Adulteration Act, and Mr.

Louis Tillett represented the defendant.—Inspector M'Keand said that on March 15 he went to the defendant's shop and asked for a quarter of a pound of mustard. The defendant served him with a tin, for which he paid 4½d., and he informed the former that the mustard had been purchased for analysis.—Mr. Tillett asked for the certificate of the analyst, and in this the mustard was described as containing, among other foreign ingredients, eight per cent. of wheat flour. The certificate did not give the weight of the sample analysed, and Mr. Tillett held therefore that the document was not in the form prescribed by the Statute.—In reply to Mr. Tillett, Inspector M'Keand said that the mustard was in a tin similar in appearance to one produced in court, and which was labelled, "Take notice that this preparation is an admixture of pure mustard with farina and choice condiments. Sale of Food and Drugs Act, 38 and 39 Victoria, chap. 63. J. and J. Colman." Witness did not see this notice on the tin sold to him, and his attention was not called to any notice.—Mr. Tillett: Can you tell me where the section provides for the attention of the purchaser being specifically called to the notice?—Witness: No.—Mr. Tillett: Then of course the summons drops.—The Chairman (to Inspector M'Keand): Have you the tin which contained the analysed mustard?—Witness: Yes; it is one exactly the same as this. I asked for mustard.—Mr. Tillett: And you were supplied with it. Continuing, Mr. Tillett repeated his objection to the certificate of analysis. He contended that, apart from the merits of the case, to which there was a perfect answer, the prosecution had failed, because a good certificate was necessary. A second objection was, that all the ingredients or component parts in the sample should be stated in the certificate.—The Magistrates dismissed the information, but declined to accede to Mr. Tillett's application for costs.

MEAT.

At the Birkenhead Police-court, on April 2, information was heard, at the instance of the medical officer of health, against Richard Brown and Arthur Brown, trading under the style of William Brown, of the abattoirs, Water-street, Manchester, for having on March 5 deposited for sale at the Woodside lairage two sides of beef which, upon being examined by the meat inspector, appeared to be diseased and unfit for human food, and was thereupon seized by him and subsequently condemned by a magistrate and ordered to be destroyed. Mr. J. Fearnley, deputy town-clerk, prosecuted, and Mr. Collingwood Hope (instructed by Mr. F. S. Moore) was for the defence.

Mr. Fearnley stated that on March 5 Inspector Wagstaffe was going round the Woodside lairages, and on entering No. 4 cooling-house he saw two sides of beef hanging among a number of other carcasses. On examining the beef the inspector found tubercles still clinging to the carcase. The inspector seized the beef, which was conveyed to the Corporation Abattoir. At the police-court next day the beef was seen by a magistrate and condemned. Mr. Brown was present, and admitted the carcase belonged to him.

Evidence was then given by Inspector Wagstaffe as to the seizure of the carcase, and Dr. Marsden, the medical officer of health, stated that the pleura had been stripped by a very clever butcher, but he was not quite clever enough.

For the defence Mr. Collingwood Hope contended that the beef was not in the possession of the defendants. The beast had been sold alive with others to Mr. James Tooth, by whom it was resold to a Jewish butcher.

Evidence to that effect was given.

The Bench, after consultation, found that the meat was in the possession of the defendants, and as its

condition was not disputed, they thought the justice of the case would be met by a fine of £10 and costs, or two months in default.

MILK.

At Maidstone, on March 30, George Steer, milk purveyor, of Melville-road, was summoned for selling a pint of skimmed milk on February 24, which was not of the nature, quality, and substance demanded.—Mr. S. L. Monckton appeared for the prosecution, on behalf of the Local Authority, and Mr. A. J. Ellis defended.—The evidence of Mr. William Jacklin, Inspector under the Act, was that he paid 1½d. for a pint of what defendant called skimmed milk, defendant having told him it was milk and water. On being told it would be analysed, defendant said he had charged witness ½d. too much, and asked him to take the coin back, but witness refused. The certificate from the Public Analyst showed that 23·5 per cent. of the fluid was added water.—Mr. Ellis, for the defence, explained that the cows had been milked by Mr. Steer's man, and one of the pails had been kicked over by a cow. The man, without the knowledge of Mr. Steer, had filled up the pail with water, in order to make sufficient for the customers. Mr. Steer found this out too late to make arrangements for another supply of milk to be obtained, and, therefore, the milk was sold with the water added. Mr. Ellis contended that by Section 6 of the Food and Drugs Act, under which the proceedings were taken, the case must fail, inasmuch as the milk must be sold to the prejudice of the purchaser. Further, it was sufficient that verbal notice should be given of the adulteration, as was done in this case.—The Bench dismissed the case.—Alfred Robert Obee, purveyor of milk, of Stone-street, was summoned for selling new milk from which a portion of the cream had been abstracted, on February 24.—Mr. S. L. Monckton appeared for the prosecution, and Mr. H. L. Bracher, for the defence.—The analysis showed that 80 per cent. of the sample purchased by Mr. Jackling of this defendant was whole milk, and that 20 per cent. was entirely deprived of cream. He had taken previously several samples from Mr. Obee, and always found them correct.—Mr. Bracher submitted that the Bench must dismiss the summons for three reasons: First, the prosecution was under the wrong section of the Act; secondly, the certificate handed in was not sufficient, inasmuch as it did not give the constituents of the milk; thirdly, if their Worship decided against him on these points, he should show that no cream had ever been abstracted. There were only two known ways of abstracting cream from milk—by allowing it to stand until it cooled, when the cream rose to the top, and was skimmed off; or by the use of a separator. And he should show that it was impossible for either of these methods to have been adopted.—The first objection the Bench overruled; on the second, they reserved their opinion; and elected to hear the evidence on the third.—Mr. Bracher accordingly called Mr. Frank Tyrer, of Vinters Farm; George Hayles, employed by Mr. Tyrer; George Henry Hales, and defendant himself gave positive evidence that the milk had been neither skimmed nor separated.—After a private deliberation, the Bench dismissed the case, Major Haynes, who was then presiding, stating that they were not satisfied that it had been shown that any cream had been abstracted. Their decision was based on the facts, and not on the technical ground.

ALLEGED ADULTERATION OF OLIVE OIL.

ANALYSTS AT VARIANCE.

At the Belvoir Petty Sessions, on March 29, before M. Wigram, Esq., and other magistrates—an adjourned summons was heard against Samuel King, a grocer, of Bottesford, for selling adulterated olive oil.—Mr. F. W.

Beck (Luton) appeared to prosecute, and Mr. Johnson (Nottingham) to defend.

Mr. Beck, in opening the case, explained that the prosecution made no sort of imputation on the defendant personally, who, without the slightest doubt, sold the oil in exactly the same condition as he received it from a firm of wholesale merchants in Nottingham, who had, in turn, probably purchased it in the same condition from another wholesale firm in Liverpool. But the Bench would, of course, understand that it was necessary, for the protection of the public and other traders, that a case of this kind should be brought before the Court. The prosecution were in a somewhat peculiar position. When the case first came before the Bench there was a suggestion that an analysis had been made of a similar sample of oil, and that it had been declared by a chemist in Liverpool to be perfectly pure, and in view of the conflicting evidence the Bench thought it right to get the opinion of a chemist of Somerset House in order that the whole of the facts might be before them on the adjourned hearing. He (Mr. Beck) was told that the Somerset House certificate had been received, and that it disagreed both with the prosecution and the defence. (Laughter.) They had heard before of doctors disagreeing, and under such circumstances it would be necessary for the Bench to decide between them. The certificate of the Somerset House analysts stated that the sample showed no traces of the presence of cottonseed oil, but contained not less than 20 per cent. of sesame oil. The county analyst, Dr. Dyer, who had examined another sample, said that the oil was adulterated both with cottonseed oil and sesame oil, and therefore they had the three conflicting analyses to deal with. He (Mr. Beck) wished to point out with regard to the respective value of these analyses, what was the exact position of the Somerset House authorities with respect to a matter of this kind, because there was a notion abroad that the Somerset House laboratories were a court of appeal from other chemists throughout the country, and that their decision was final. There was no doubt that in a division of opinion between two sets of chemists, Somerset House was allowed to act as arbitrator, but it was not so constituted under the Act. Mr. Beck went on to quote cases to prove that where there was a divergence of opinion the certificate of the Somerset House authorities was by no means binding on a court of law, and all the Court had to do was to attach what they considered to be proper weight to such a certificate. He (Mr. Beck) was bound to remark that the certificates of the Somerset House authorities were not viewed by the analysts throughout the country with the respect that it was perhaps desirable they should be, and he believed it was pretty clear that the analysts and the scientific world were right when they said that the Somerset House methods were not up to date. One ought, perhaps, to speak with bated breath of officials, but there was danger in officialism, and there was a

danger that officials preferred obsolete methods to new, and were quite content to perform their duties in a perfunctory way. Not being in contact with the commercial world—and not, to some extent, with the scientific world—they were not able to keep their methods up-to-date, and that was certainly a matter to be greatly regretted by those who were interested in the administration of this Act. Mr. Beck added that he proposed calling several eminent analysts who would support the certificate of Dr. Dyer. He was not pressing for a penalty, but he merely wanted to show that the county authorities and Dr. Dyer were correct in instituting these proceedings, and he should be quite content if the Bench would deal with the matter as they thought right.

Mr. Johnson pointed out that the Somerset House certificate carried considerable weight, and that where there was any reasonable doubt the defendant was entitled to receive the benefit. Without wishing to cast any reflection on the analyst, he desired to remark that there was a difference of opinion between the analysts, and for that reason he thought it was the duty of the Bench to dismiss the case.

Mr. Beck: The Somerset House certificate does not support the defendant. It simply says that the oil, instead of being adulterated with one article, is adulterated with another.

Mr. Johnson said that as the case was adjourned for Dr. Dyer to support his analysis, it was only fair that the Somerset House authorities should have an opportunity of bringing fresh evidence in support of theirs.

Mr. Beck: I should be very pleased to continue to come here once a fortnight, but I am afraid the county would not appreciate it. (Laughter.)

Dr. Dyer, public analyst for the county, said that he had had 20 years' experience in the analysis of oils. He examined the sample of oil in question, and certified to Inspector Hollick that it contained 20 per cent. of cottonseed oil. Hearing afterwards that his analysis had been disputed, he had since submitted the sample to four other analysts of wide experience—Dr. Stevenson, Mr. Otto Hehner, Mr. Bevan, and Mr. Cassal—and he had also himself made a further examination of the sample, with the result that he had discovered, in addition to the 20 per cent. adulteration by cottonseed oil, another 5 per cent. adulteration by sesame oil. Dr. Dyer explained that the method of analysis adopted by himself was that known as the "silver nitrate test," and he pointed out to the Bench, by means of samples, the effect of the test upon the different samples of adulterated oils.

In reply to Mr. Robinson, Dr. Dyer said he had no specimen of olive oil merely adulterated with 20 per cent. of sesame oil, but he would give him his word that olive oil adulterated in such a way, and treated in the same manner, would look exactly the same as the sample he produced. He did not test for sesame oil in the first instance, and that was why he found no traces

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of it in the first examination. Had he done so he would have discovered the other adulterant. The "silver test" was the test usually adopted, but there were four or five distinct ways of applying it, and to be successful it needed to be done very skilfully. He did not suggest that Mr. Conroy, who had analysed the sample, did not understand the silver test, but he suggested that he did not apply it properly. There were certain modifications of the test, and the people of Somerset House had a pet modification of their own. He (Dr. Dyer) had applied that test, and so had his colleagues, and it proved the presence of the cottonseed oil abundantly. (Laughter.) Why they should have failed to detect it he could not understand.

Mr. Johnson: Can you suggest any reason why there should be a double adulterant used?—Dr. Dyer: It is customary to use various kinds of oil for adulteration according to the fluctuations in the price.

Witness quoted the following prices which he had from Mincing-lane on the previous Saturday:—Olive oil, £56 a ton; sesame, £32; and cottonseed oil, £17.

Mr. Johnson: The price of the sesame oil is nearly double that of the cottonseed oil?—Yes, and there is a much smaller quantity used.

In reply to further questions, Dr. Dyer said that if the same implement was used in measuring out the two varieties of oil without it being cleansed some slight portion of the cottonseed oil might be traceable from that cause, but nothing like to the extent of 20 per cent. The test was not absolute in the sense that the various compounds could not actually be segregated and weighed out. It was an inferential test, as many other tests were, but it was not this test upon which the proportions were calculated. There were a number of chemical points—some half-dozen or more—from which the analyst inferred the proportions of the oils. It was easily possible to calculate the quantities to within one, or at most two, per cent. In reporting for a legal purpose the analyst discounted it a little, and said "at least so much."

Mr. Otto Hehner, Public Analyst for Nottinghamshire, West Sussex, and the Isle of Wight, deposed that he had also examined the sample of oil produced, and the result of his analysis was the same as that of Dr. Dyer.

Mr. E. J. Bevan, County Analyst for Middlesex, also bore out the evidence of Dr. Dyer. He examined the sample, and came to the conclusion that it contained a large quantity of cottonseed oil, and a small quantity of sesame oil. He made the test with the silver solution.

Mr. Cassal, Public Analyst for St. George's, Hanover-square, Kensington, Battersea, and the neighbouring division of Lincolnshire, gave further corroborative evidence.

The Bench retired to consider their decision, and on their return, after an absence of a few minutes, the Chairman said the conclusion they had come to was this was a case in which no penalty could be inflicted, but at the same time they thought there had been a mixture of cottonseed oil in the olive oil. Their thanks were due to Dr. Dyer and the other chemical gentlemen who had come down there and explained the matter so clearly.

REVELATIONS OF THE TINNED SALMON TRADE.

Those who have noted the frequency of poisonings by tinned salmon will read with much interest the following letter which appeared in our contemporary *The Globe* recently:—

"Sir,—While in British Columbia last summer, I read a reprint, in a Yorkshire paper, of an article published by you upon this subject, in which it was suggested that 'all tinned fish should be given the go-by.' Being at the time in the thick of the salmon canning industry at Steveston, Fraser River, I was much

interested in the statement, and made particular observations of the whole canning process. The recent case of direct poisoning from tinned salmon at Poole induces me to trouble you with a few facts supplementing your advice. I say direct poisoning, because it would probably be impossible to trace the numbers of deaths due indirectly to the eating of tinned salmon. The large, very large, number on record of undoubted poisonings, however, makes the subject of the gravest importance. And as very few but the cannery proprietors and their Chinese coolie employes reap any material pecuniary benefit from the industry, it becomes a duty to endeavour to have the present dangerous and criminal methods of canning immediately abolished. There is ample time before the ensuing canning season to have new and effective measures established, so that no more of these veritable death-traps may be thrust upon the working classes market. Indeed, the cargoes of last year's pack aboard certain ships shortly expected at Liverpool should be carefully examined officially before being permitted to be sold; and, in one instance at least, I would say on oath, seized and destroyed!

"Allow me to state why I make this assertion. At a cannery at Steveston I saw fish received from the fishermen, in large and small lots, varying generally from 30 to 5 fish, and kept piled upon one another, just as thrown in from the boats, for several days, until something like two or three thousand fish were on hand, before cleaning and canning, so as to save the expense of steam, etc. The thermometer is rarely below 70 degrees, and often 90 degrees, Fahr. in the shade during the greater part of the canning season, so that you may imagine the condition of the fish first received, which would be underneath the later lots, at the time of putting into the cans. The Chinamen who gut the fish use the keenest knives, constantly ground and sharpened, but are often unable to make a clean cut or to prevent the flesh tearing away, owing to its rotten state. But however bad the fish is it is canned. This is the usual state of things, but I have seen at the busiest times so many as 15,000 or 16,000 fish piled up three or four feet high, and the stench arising abominable. When there were such quantities, the fishermen's catches had been supplemented by some thousands which came from the traps near Point Roberts, U.S.A., some 20 miles distant, and which were collected by a steamboat about twice a week. The manager of the cannery had an interest in the traps, and sold the fish to the canning company. I saw every lot of trap fish, and not one lot was good on delivery, except the last and smallest lot (about 300 fish), which was received in comparatively cold weather, at the end of the season. I called the manager's attention to the fact of the fish being tinned in a bad state, and he stated that his fish were better than those of any other cannery, although I saw them put into the tins in a putrid condition, and pushed my finger right through some of the fish before they were cut! The carbonic acid gas generated in a tin of such fish surely must be deadly.

"But no matter how bad the fish may be when put into the tins, no smell arises after the long cooking they get. The tins are soldered up and put into rapidly boiling water and kept boiling hard for an hour, when they are pricked to let out the steam, etc., and immediately resoldered and put into a retort and subjected to a heat twice that of the boiling water for another hour. But if the fish were fresh and good when gutted, there is another element of danger in the method, because the fish, after gutting, are washed in the river water, which, in addition to its normally dirty state, and prolific of products of decomposition, is, at the canning season, really shocking from the fish offal, which is all dropped from the canneries into the water through holes made for the purpose in the flooring; and, as every bit of the

riparian land at Steveston is occupied by canneries, and eddies obtain all along in front of the buildings the accumulation of offal which washes up and down and to and fro makes of the water a breeding pond, so to speak, for bacterial organisms. I was informed by a competent authority that it takes six weeks or two months after the canning is finished for the river to get anything like clear of the offal, a good deal of it remaining to decay. This is the 'water' in which all Fraser river salmon is 'cleaned' before putting into the tins.

"In making and soldering the tins, too, muriatic acid is used in dangerous quantities. If the cannery proprietors were less greedy of profit this dreadful state of affairs might be abolished, and a fairly wholesome article put upon the market. There is an abundance of pure water easily obtainable from New Westminster, and at small cost, and if Government inspectors were appointed to see that such pure water was used, and none but fresh fish dealt with, and to stamp every tin, the poisoning would be reduced to a minimum. They had, I believe, to adopt some such plan in Newfoundland and Eastern Canada with regard to barreling codfish, etc. White men, too, should be employed in place of the Chinese coolies, who are of the filthiest, and handle every bit of salmon in such a manner that I am sure no one who saw the tins packed would ever again voluntarily eat the contents. This year is supposed to be the "big" year for salmon. Every fourth year has hitherto proved the largest, and the present is the fourth from the last "big run." Something should be done beforehand. Last year's pack on arrival should be thoroughly overhauled first as a warning, and all loss to the packers would be richly deserved. The salmon cannery business was, in the past, exceedingly profitable, so that during the last few years the canneries have trebled in number; but as a consequence the fishermen get four or five times as much for their fish, and the competition in business has greatly curtailed the profits; and many proprietors are trying to form companies of their concerns. In a prospectus lately published in this city it was stated that the daily consumption of salmon in England was not less than 121,370 lbs. Therefore, all the more necessity for Government supervision to prevent the criminality I have attempted to describe.

"The cannery I refer to—the name of which I will readily give—and many others also, artfully provide so much as can be against exposure by adopting many brands or labels, all this containing exactly the same kind of fish and packed in precisely the same way, so that the order of the jury in the Poole case to have all fish of the same brand destroyed was of little good. It is the output of this cannery that I would seize on arrival in England. I should be glad to furnish you with further and comprehensive details relating to the subject, which comprises many features not even touched upon here, and which cannot be adequately dealt with in a letter which, I fear, I have already made far too long, and for which I beg to apologise. Kindly make what use you please of my information.—Your obedient servant,

C. Wood.

"14, Kirkmanshulme-lane, Longsight,

"Manchester, March 8.

"P.S.—Several of the employés in the cannery spoken of were stricken with typhoid fever last summer. One, a fireman, recovered after three or four weeks' serious illness, and another, a watchman, died; both of these were white men. I am prepared to swear to the accuracy of the whole of the above."

BEER MATERIALS.

At the eighth sitting of the Departmental Committee appointed to inquire into the ingredients used in the manufacture of beer, the Earl of Pembroke, the chair-

man, presided, and there were present Dr. James Bell, Sir J. H. Gilbert, Professor Odling, Mr. H. W. Primrose, Mr. Clare Sewell Read, and Mr. W. Blain, secretary.

Mr. A. Gordon Salamon was recalled and further examined. He said that, from his own knowledge of Burton brewing—he had been employed in large breweries in Burton, and knew the trade thoroughly—he could assert that a very large proportion of malt adjuncts and foreign barley was employed by Burton brewers. If they did not employ these adjuncts Burton would not be able to compete with the beer produced in other parts of the country; it would lose its status. His remarks applied to nearly all classes of beer produced in Burton, but it was possible that they could, and did, produce beers which they stored for a long time without the use of adjuncts, but, taking it altogether, as a general statement, sugar was very largely employed in the brewing of Burton beer—not raw sugar, but properly prepared and expensive brewing-sugar. He would describe Mr. Quilter's beer, as it would be made throughout the country if his views were to obtain, as impure beer, and he would describe it as an unhealthy beer for the reason that it would always be undergoing secondary fret and fermentation, and the object of using these adjuncts was to obviate any such secondary frets. Therefore, from that point of view, it would not be as healthy as a beer prepared in the way it was now prepared. With respect, however, to the question of the nutritive properties of the ingredients themselves, he did not believe there was any difference.

Mr. Cornelius O'Sullivan, F.R.S., said he had been nearly 30 years in the employment of Messrs. Bass, Ratcliff, and Gretton as a chemist and brewer. Speaking generally, the Burton brewers, to some extent, used adjuncts. He would not say that all of them used them, but, taking them generally, they did. That observation applied chiefly to beer that was sold to the private customer, but in the higher class of Burton pale ale and such beers no adjuncts were used. They were brewed entirely of barley malt, and hops. As a general rule, sugar was used for priming at the present day. He did not think it would be advisable to prevent by any law the use of adjuncts in brewing, so long as they were not deleterious. It would not only not be advisable for the sake of the consumer, but also for the sake of the farmers. Even in the case of the Burton brewers he believed it would be a hampering and restriction of their trade if such a law were passed. Taking English barley as a whole, it was more necessary to use malt substitutes when brewing with English barley than when brewing with foreign barley. In really good years a very large quantity of English barley could fairly be used without any adjunct, but, taking it as a whole, even if there were sufficient of it, at the present time, brewers would have to seek a portion of their material elsewhere than from even the highest class of English barley. As a matter of fact, they used both, but as far as his firm were concerned the adjuncts were only used to a very small extent, and that in low-priced beers. He did not think those beers were sold to public-houses. Bass and Co. brewed practically the same beer as they brewed 30 years ago. They used a certain proportion of sugar or sugar-solution for priming. That was invariably used except in the export beer and the higher class keeping beers, when it is unnecessary to use it. Priming is used in order to mature beer in a moderately short time. Beer when brewed from English and foreign barley has "more style," as it is called, than when brewed from English barley alone. If a law were laid down that no beer was to be sold without some declaration on the part of its seller as to the substances of which it was composed, he thought it would materially hamper the trade. As representing the brewing interest in Burton, he should object to any Bill on the lines of Mr. Quilter's being made law. He had never known anything of the use of hop substitutes in brewing.

BRECONSHIRE COUNTY COUNCIL AND ADULTERATION.

THE following letter was read from the Local Government Board :—

“ Whitehall, London, S.W.

“ February 5, 1897.

“ Sir,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 18th ult., forwarding copies of the quarterly reports for 1896 to the public analyst for the county of Brecon. The Board observe that only 28 samples of food and drugs have been obtained by the officers of the Brecon County Council for submission to the public analyst during the past three years, notwithstanding the fact that of the 97 samples analysed in the previous three years a large number, amounting to 27 per cent., were condemned as adulterated. I am to add that the number of samples taken in the three years 1894, 1895, 1896, does not appear to the Board to be large enough to enable a fair judgment to be formed by the Council as to the food supplies of the county. I am to request that the matter be brought under the notice of the County Council, with a view to more efficient action being taken to carry out the Sale of Food and Drugs Act in future.—I am, etc.,

“ ALFRED ADRIAN,
“ Assistant Secretary.”

The communication was laid on the table.

STAFFORDSHIRE COUNTY COUNCIL AND THE SALE OF FOOD AND DRUGS ACT.—FERTILISERS, ETC., ACT.

THE committee considered the following report of the Food and Drugs Sub-Committee upon the special report of the County Analyst and Inspectors as to the recommendations of the Parliamentary Committee upon food products adulteration :—

The Sub-Committee beg to report that in conference with the two Inspectors and the County Analyst they have considered the recommendations of the Parliamentary Committee upon food products adulteration, and wish to emphasise the special need of legislative provisions on the following matters :—

FOOD AND DRUGS ACT.—NOTICE ON SALE OF MIXED ARTICLES.

Not only that distinctly printed notice of mixture should be required on labels of condiments, manufactured and proprietary articles, but that the vendor should be required to prove that he gave special notice to the purchaser in all cases in which he sought to substitute another or a mixed article for that demanded by the purchaser.

INVOICES TO HAVE THE FORCE OF WARRANTIES.

That where a vendor intends to rely upon the warranty (by invoice or otherwise) of the wholesale dealer he should have power to require a summons, with copy certificate attached, to be served on such dealer, to be heard at the same time as the summons against himself.

FOREIGN ARTICLES.

That dealers who obtain supplies of food from abroad should be required to submit to the customs guarantees of purity given by the foreign vendor, with evidence that they have taken measures to see that the goods are such as guaranteed.

SAMPLES OF ARTICLES IN TRANSITU.

That the powers of Section 3 of the Sale of Food and Drugs Amendment Act, 1879, should be extended to other articles besides milk, and should be made to apply to the place of despatch as well as the place of delivery.

DIVISION OF SAMPLES.

That the division of every sample, after purchase,

and the delivery of one portion to the vendor, should be compulsory, and that where the vendor intends to rely upon the warranty (by invoice or otherwise) of the wholesale dealer, he should be bound within (say) three days to forward to such dealer the portion of the sample delivered to the vendor by the purchaser. This would render it unnecessary to divide into four portions, which the inspectors consider would be very objectionable.

PENALTIES FOR OFFENCES.

That for second offences a minimum penalty should be prescribed, and that for third or subsequent offences there should be a power of ordering imprisonment without the option of a fine.

DEFINITION OF “FOOD.”

That this should be extended so as to include expressly all articles intended to enter into or be used in the preparation or flavouring of food.

COURT OF REFERENCE.—STANDARDS.

That a tribunal should be established to act as a Court of Reference upon scientific and other questions arising, and also should be empowered to prescribe standards and limits of the quality and purity of articles.

PUBLIC ANALYSTS.

That qualifications of fitness should be prescribed.

MARGARINE.

- (a) That artificial colouring should be prohibited.
- (b) That the mixing for sale of margarine and butter be prohibited.

PROCEEDINGS.

That a copy of the analyst's certificate should be attached to and served with the summons in every case.

MILK.

That the addition of water to milk should be made illegal.

FERTILISERS, ETC., ACT.

That, having regard to the difficulties which private purchasers have been proved to experience in complying with the statutory and official regulations on taking samples, it would probably extend the beneficial operation of the Act if the officials acting under the Food and Drugs Acts were empowered to take and submit samples for analysis, but not so as to supersede the right of a private purchaser to do so.

J. CHALLINOR, Chairman.

It was resolved that the County Council be recommended to approve of the report, and order it to be transmitted to the Local Government Board and to the Board of Agriculture.

THE LONDON COURT OF COMMON COUNCIL AND SANITARY OFFICERS.

ON the half-yearly report of this committee, recommending the re-appointment of Dr. William Collingridge, medical officer of health, and of the sanitary inspectors, Mr. R. W. Edwards urged that there should be an improvement in the status and emoluments of the inspectors, whose authority was diminished by their being “weekly servants.” Mr. Morton replied that the inspectors were better paid than in other ports, and that, being appointed for a twelvemonth, they were in no sense weekly servants. Mr. Low repeated something which he had previously said about the officers having a “pleasure yacht,” which provoked the indignant rejoinder from Mr. Hitching that Mr. Low, as an importer of canned goods, ought to know that the yacht was used for purposes much more important than mere pleasure. The appointments were then confirmed.

THE FOOD PRODUCTS ADULTERATION BILL.

MR. JEFFREYS (Hants, Basingstoke) asked the First Lord of the Treasury, on March 25, whether his attention had been called to the evidence given by the influential deputation from the Central and Associated Chambers of Agriculture and other representative bodies, received by the President of the Board of Agriculture on the 2nd inst., that a Bill to give effect to the recommendations of the Select Committee on Food Products Adulteration would receive general support from all quarters of that House; and whether, under these circumstances, the Government would introduce and press forward such a measure in the present Session.

Sir J. Leng (Dundee) had a question upon the paper referring to the objection taken to one of the recommendations of the committee in large cities like London, Manchester, Birmingham, and Glasgow.

Mr. Channing (Northampton, E.).—Before the right hon. gentleman answers that question may I ask whether he is aware that the deputation had the warmest support of members of this side of the House as well as on the other side.

Mr. Balfour (Manchester, E.).—As my hon. friend will see if he looks at the next question on the paper, which I may, perhaps, answer at the same time, the general support which he believes, and I hope rightly believes, would be given to any measure of this kind on both sides of the House is, at all events, not universal. I cannot at this moment make any promise as to the introduction or passage of such a Bill, but I will consult with my right hon. friend the President of the Board of Agriculture as to whether in any case it might not be desirable to bring a Bill before the House and read it, at all events, for the first time, in order that the public may be able to judge of the character of the provisions which, in the opinion of the Board of Agriculture, it is desirable to introduce.

PROPOSED PUBLIC LABORATORIES AT CARDIFF.

PROFESSOR HAYCRAFT and Dr. Walford attended as a deputation at a meeting of the Health Committee of the Cardiff Corporation, on March 23, with a view of asking the Committee to co-operate in a scheme for the establishment of a Public Laboratory in Cardiff.—Professor Haycraft stated that the question of the public health had only been recently raised in the country, but, notwithstanding this, two thousand officers of health had been appointed throughout England and Wales. During the last few years the investigation of water, food stuffs, etc., had been greatly extended, and, consequently, increased laboratory accommodation was necessary. It was only thirty years ago that it was discovered that a number of diseases were due to bacteria and micro-organisms, and since then it had been found that thirty, forty, or even fifty kinds of disease—cholera, typhus fever, typhoid fever, etc.—were due to the same causes. Investigation of the germs required a technique of its own, and could only be carried on by specialists. There could be no doubt that special, extensive, and expensive laboratory arrangements were needed. Throughout the country great efforts had been made to meet the requirements of the science, and two years ago the idea was mooted in Cardiff. A meeting was held to consider the matter, and since that time an identical movement had been aroused in England, and various authorities had decided to solve the problem in the same way as they were suggesting to do in South Wales. In London laboratories had been started, and it was felt that they would do much towards improving the general health. Locally, the Glamorgan County Council had taken the matter up, and had appointed a sub-committee to meet other bodies. The Technical Instruction Committee had taken a similar step.—Dr. Walford emphasised the fact that a laboratory would be of immense service to the public officers of health in the district.—The Chairman (Alderman Jacobs) expressed his sympathy

with the movement, and felt certain that the committee would render it help. He asked if their medical officer would have full access to the laboratory if it were established.—Professor Haycraft replied that nothing had yet been decided or definitely suggested, but he took it that each of the bodies concerned would have a voice in the administration.—Mr. Hughes asked how many bodies had been approached upon the matter.—Professor Haycraft replied that he thought they could rely upon support from the College, the Technical Instruction Committee, the County Council, and, he hoped, from that Committee. Then it was possible that Swansea and Monmouthshire would co-operate in the scheme. In reply to another question, Professor Haycraft said that the cost had been roughly estimated at £4,000, and the laboratory it was thought would cost about £425 per year to maintain.—Mr. Hughes moved a resolution approving of the scheme, and suggesting the appointment of a sub-committee.—Mr. Morel seconded.—Mr. H. Jones thought there was no need to hurry the matter. He wanted further particulars. What was it actually proposed to do?—Professor Haycraft replied that it was proposed to have in the town a suitable apparatus and a person capable of making examinations into micro-organisms, etc.—to have, in fact, a specialised department of science.—Mr. Jones: But these things are done in London.—Dr. Walford: Yes, but great delay is incurred in sending to London. Suppose a vessel comes into dock from an infected district, we could have a thorough examination without causing any delay. This would be of much advantage to the port.—Professor Haycraft spoke of what was being done in Switzerland and other countries, which he said were a long way in front of England or Great Britain. Great sums of money were being spent, and the authorities were always repaid in the end.—Mr. Jones then expressed his approval of the scheme, and the Chairman, Dr. Buist, Mr. Jones, and Mr. Hughes were appointed a sub-committee to confer with other sub-committees upon the subject.

SHEFFIELD'S PENNY-WISE-AND-POUND-FOOLISH POLICY.

DR. HARVEY LITTLEJOHN, Medical Officer of Health for Sheffield, has resigned his appointment on being chosen Lecturer on Medical Jurisprudence and Public Health in the Medical School of the Royal College of Surgeons and Physicians, Edinburgh. This appointment has just been vacated by Sir Henry Littlejohn, Medical Officer of Health of Edinburgh, father of Dr. Harvey Littlejohn, and also of the Medical Officer of Health for Scarborough.

We expected this would occur when the Sheffield City fathers very foolishly refused to give Dr. Littlejohn a fair salary. However, if Sheffield is satisfied to be an experimental city, from whence more enlightened places may draw officials of experience, it is good for the other places, if not for Sheffield. A new medical officer may, in a couple of years, have a fair knowledge of the city's needs, and when he has attained that, and experience in health work, we trust he will meet with more common-sense recognition of good service than Dr. Littlejohn received. We do not recommend any of our bachelor readers to apply for the post. We believe one reason for refusing Dr. Littlejohn an increase of salary was that he was stated to be a bachelor, and had consequently less expenses than he would have were he a married man. It would be interesting to know what Sheffield would give to a vegetarian, anti-tobacco, anti-alcohol medical officer of health. Possibly they would consider his lessened expenses would warrant them believing he could, or should, live upon 6d. per day, which sum, we believe, some earnest vegetarians regard as ample for the most finished gourmand. Logically, if to be unmarried is a reason for giving one less salary, to be a vegetarian, non-smoker, and non-drinker would be equally good as a reason for miserliness.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, APRIL 17TH, 1897.

OUR BOARD OF AGRICULTURE FARCE.

It appears that we are not alone in understanding and proclaiming the farcical character of our Board of Agriculture. We will restrain ourselves anent the muzzling order, albeit we have been bombarded by querists who have asked us if the official heads had financial interests in wire. We don't believe it, for we are convinced their only financial interests lie in rousing themselves periodically from a state of laziness and nerving themselves for the arduous task of signing receipts for their salaries. As the Board stole the idea

and the aims of the Board of Agriculture journal from the Editor of this journal, it is a charming side light on the usufruct of that theft to find the following candid criticism of the stolen journal in our contemporary *The Fruit Grower*.

"It is rather astonishing to notice the misleading nonsense which figures this time in the pages of the *Journal* of the Board of Agriculture, just issued. Take one case out of many. We are told first that the damson crop was short, and that prices were low. Also that the average of 1s. 8d. per half sieve only was maintained. Will the Board of Agriculture tell us when the damson trade ever wound up within 50 per cent. as good as that of last year? The assertion is most lamentable and very discreditable for an official publication. It really looks as if it were all guess work; and, if that view be correct, it is a matter that calls for the attention of the friends of the rural industry in the House of Commons. This is not the first time that similar errors have appeared in its publication. It is no justification to urge that trade papers reproduce even the remarks of which we complain without protest, for the simple reason that this sort of matter is taken by such editors as economical fill-ups; and as to no protest following the reproduction, well, being as incompetent as the propagator of the nonsense condemned, they are unable to understand the reliability or otherwise of the information they set before their readers. It is a pity that such misleading information is not nipped in the bud. The Board is an expensive farce, and its dwindling publication proves that point more emphatically than we do."

Some Member of Parliament surely ought to call attention to the ridiculous nonsense and misleading rubbish which is published by amateur thinkers and paper spoilers in this precious government publication, hatched in theft and run in ignorance.

THE CHEMICAL SOCIETY.

THE Chemical Society has elected Prof. Dewar, M.A., LL D., F.R.S., as its president. The late president, Mr. Vernon Harcourt, has pleaded so hard for sympathy for his successor that the Chemical Society remind us of a married man who was loudly proclaiming the advantages of the married state. "When I was single," he said, "I was as miserable as a shot dog. I married, sir, for sympathy!"

His listener quietly said, "You have mine."

We can assure the Chemical Society that they have our sympathy. It is not often we find ourselves in accord with the *Pharmaceutical Journal*, but our contemporary's report, which we take it is also its opinion, is, we think, admirable. Our contemporary says:—

"An ordinary meeting was held on April 1, the new president taking the chair. There is usually some little enthusiasm shown when a new president takes the chair for the first time. On this occasion, however, Prof. Dewar's reception was decidedly cold. This, without a doubt, was due to his unpopularity amongst a certain section who opposed his election almost rancorously. The gentlemen composing this section of the society, however, may be reminded that the doughty professor is quite at home on the subject of low temperatures; indeed, it is difficult to imagine for a moment that he was at all dismayed or put out in any way when he suddenly felt himself in the "cold" atmosphere of the Chemical Society's rooms on Thursday night.

"The meeting was quite sparsely attended. The late president, Mr. Vernon Harcourt, looked strangely out of place on the front bench, and Prof. Dewar, in the chair, disclosed the fact that he was a new hand in many little ways. Only once did he show any sign of nervousness—or, perhaps, it might have been absence of mind—and that was when he said: 'I am afraid we

must pass a vote of thanks,' etc., at which there was loud laughter on certain benches."

This fact is eloquence itself.

LAMBETH VESTRY.—EXTRAORDINARY PROCEEDINGS.

THE insanitary inaction of the Lambeth Vestry has aroused such intense disgust amongst some ratepayers that bills, adorned with a skull and crossbones, and drawings of diphtheria, cholera, typhoid, scarlet fever, and influenza germs, along with the following piteous plea, have been distributed throughout the district :—

"Unhappy Herne Hill (reprinted from *The Brixtonian*, March 20, 1897):—Avoid diphtheria, typhoid fever, blood-poisoning, and sudden death is the advice given to the residents of Herne Hill, and particularly to the whole of the inhabitants of Rollscourt Avenue, upon a very showy poster extensively exhibited in that neighbourhood. An allegation is made therein against the Lambeth Vestry that they have and still intend to neglect the sanitary requirements of those residents. The roads in question, it is rumoured, may not be taken over by the Vestry for the next ten years, and, should they continue to remain in their present filthy state, the residents of Rollscourt Avenue may before that date be called to their fathers. As a precautionary measure, and with the hope of getting something done by the Vestry to mend matters, a small committee has been formed for definite objects. The first of these is to institute a house-to-house visitation to realise by statistics the amount of illness arising from the effects of living amidst the rubbish of dead cats and other animals at night shot into pools of water and slush, right under the noses of the inhabitants, particularly where the houses are specially ventilated. The next is to again apply to the vestry, but this time by a petition to each individual member, showing medically the dangerous condition of the neighbourhood and the enormous expense to which some of the purchasers of the houses have been subjected in consequence of the bad roads. Should there be no result, then the committee intend to perambulate the neighbourhood with posters, and to give lime-light pictures showing the terrible dangers such neighbourhoods are subjected to, and thus, little by little, arouse public opinion and the constituencies to such a pitch that vestrydom itself will possibly give way to a better state of things, thus allowing people to live out their natural lives. We can scarcely realise that the vestry have turned a deaf ear to the residents of Herne Hill, and permit them to remain in such an unsanitary state as to jeopardise their lives. If it should be true it is monstrous, and we will lend our aid to ensure the alteration which is desired."

When the inhabitants of a London district are driven to adopt such extraordinary means as these of goading their local authority to do its duty one is driven to suppose that there must be something very rotten in the state of that authority. If things are so bad, the aggrieved ratepayers might ask their member of Parliament to ask a few necessary questions in the House and demand a Local Government Board enquiry.

BERMALINE BREAD.

THE Wolverhampton magistrates have decided that this is not fancy bread within the meaning of the Act, but we hear that the manufacturers, Messrs. Montgomerie and Co., Ltd., have decided, in the interests of their customers, to appeal against the decision. Our own opinion is that Bermaline is fancy bread, and we believe its manufacturers take the right course in

standing by their customers. The decision was in the case of Mr. William Mills, baker and confectioner, of Worcester-street, Wolverhampton, charged with selling a brown loaf known in the trade as "Bermaline" bread otherwise than by weight.

The Bench delivered judgment as follows: "The Bench are of opinion that the bread in question was not fancy bread within the meaning of the Bread Act; and further that, even if it was otherwise, the bread was not sold as fancy bread. They, therefore, convict the defendant, and fine him £2 and costs, or, in default of payment, one calendar month's imprisonment. They are prepared to grant a case, if applied for, upon the point whether the bread in question is fancy bread or not. Mr. Harrison, who appeared for the defendant, intimated that he should give notice of appeal. Mr. E. H. Thorne said he understood from a private conversation he had had with Mr. Harrison that his idea was to appeal to the Recorder at the Quarter Sessions. Mr. Harrison said that was so. Mr. Thorne said that in the interests of all parties the appeal should be made to the higher court. Mr. Harrison: We have to consult counsel, and the gentleman who appeared for us last week is in London.

"The Town Clerk said that, even supposing the defendant was successful at the Quarter Sessions, there was nothing to prevent the prosecution laying another information against him. The quarter sessions would not decide the question of law, but only the question of fact. The effective way of dealing with the case was by applying for a special case. If defendant went to the sessions it would probably lead to further litigation. Mr. Harrison said he would ask the Bench that if counsel advised the appeal to the higher court, they would not object to his being allowed permission to ask for a case so that he did so in the prescribed time. The Bench intimated their willingness to accede to this."

Common sense surely proclaims that a person buying "Bermaline," "Hovis," or like breads, is buying a fancy bread. The names are fancy, and proclaim that the bread is a special and fanciful preparation in contradistinction to bread as ordinarily prepared.

POOR MILK.

AT Epsom Petty Sessions, on March 29, George Dodge, of Cannon Farm, Fetcham, appeared to answer an adjourned summons for selling milk which was deficient in butter fat.—Mr. J. H. Gould prosecuted for the County Council, and Mr. F. W. Bailey defended.—The case had been adjourned from a previous Court to enable the County Council to call Dr. Stevenson, the County Analyst, to give evidence. It will be remembered that at the previous hearing the prosecution put in a certificate to the effect that defendant's milk contained 2.53 per cent. of butter fat, whereas it was contended that the minimum should be 3 per cent.—Mr. De Hailes, the analyst, called on behalf of the defence, upheld the evidence he had previously given, that the milk in question was naturally poor milk, and that there had been no abstraction of cream.—Defendant stated that his cowman had neglected to give the cows cake, which accounted for the pooriness of the milk. He kept 70 cows, and had never, on any occasion, sold cream or butter. Dr. Stevenson said he gave a certificate to the effect that the sample of milk contained 2.53 per cent. of butter fat and 11.18 per cent. of other solids. The Society of Analysts had fixed the average at 3 per cent., and the authorities of Somerset House at 2.73 per cent. of butter fat, but in mixed milk he should not expect the average to be as low as 2.53 per cent.—In reply to Mr. Braithwaite, witness said no water had been added to the milk, and, in answer to a question as to how the butter fat could have been lowered without the addition of water, he

explained that this might have been caused by continual dipping. He could not say that the butter fat had been removed intentionally.—The Bench felt that they could not resist the figures of the Public Analyst, therefore they must convict. In this case, however, there was no guilty knowledge on the part of the defendant, who left the Court without a stain upon his character. As they felt that he would be sufficiently punished by the costs, the fine would only be 10s. Each party must pay their own costs of the first day's proceedings, the second day's costs to be met by the defendant.

ADULTERATED MILK AND RAILWAY COMPANIES.

At the Pontypridd Police-court, on March 31, Gomer Dudson, milk vendor, Ferndale, was summoned for selling milk containing 11 per cent. of added water. The defendant urged that he had sold the milk in the same condition as he had received it from the farm. Robert Cousen, farmer, Gloucestershire, in his evidence stated that he had supplied the defendant with the milk. He kept about 50 cows, and had sold milk for the past 15 years. He believed that the milk had been adulterated while in transit on the railway. The railway companies would not allow the senders to lock the milk cans. The cans of milk were left for hours on the platforms in all sorts of weather, and any person could easily open the lids and steal some of the milk and replace the quantity taken away by water.—The Stipendiary remarked that it would be easy to tell the quantity of milk in the cans by weighing them, and the tare or weight of the empty cans could be stamped on them. The farmers would have a very good case if they petitioned the companies for permission to lock their cans under such conditions.—The Bench also agreed that as far as Dudson was concerned it had not been proved that he had personally adulterated, but it was clear that the milk had been adulterated by someone, but nevertheless the public must be protected. Defendant was mulcted only in the costs.

Richard Thomas, milk vendor, Ferndale, was summoned for selling milk containing $3\frac{1}{2}$ per cent. of added water on March 2. Defendant said he had not put any water in the milk. He had had the milk from George Cousins, Islington Farm, Wells, Somersetshire.—The Stipendiary remarked that the case was exactly the same as the previous one. This defendant was also mulcted in the costs.

HOW SPIRITS ARE ADULTERATED.

At Thames, on March 31, John Mitchell, trading as the Empire Wine Company, 610, Mile End-road, was summoned at the instance of Mr. C. Cox, inspector under the Sale of Food and Drugs Act for the Hamlet of Mile-End Old Town, for selling rum adulterated to the extent of 49.5 deg. under proof, which was 25.5 deg. below the minimum strength allowed by the Sale of Food and Drugs Act. Also for selling brandy adulterated to the extent of 48.50 per cent. under proof, or 23.5 deg. below the minimum strength; for selling gin adulterated to the extent of 49.5 deg., or 14.5 deg. below the minimum strength; and whisky which was 49.9 deg. under proof, or 24.9 deg. below the minimum strength.—Mr. Milner Jutsum, who prosecuted, said a few months ago a new business, called the Empire Wine Company, was started, and advertised very largely as to the very cheap things they supplied. On the 1st inst., the inspector under the Food and Drugs Act purchased bottles of the above-mentioned spirits. The spirits had been submitted to the public analyst, with the result as stated above. It was afterwards found that on the labels, in very small letters, was the statement, "Blended and reduced to 50 under proof." He

(Mr. Jutsum) submitted that was not a reasonable notice.—For the defence it was submitted that there was a declaration and disclosure as to the quality of the spirits sold. There was also a notice prominently exhibited in the shop that all spirits were diluted.—In giving his decision, Mr. Mead said if there were no decisions by which he was bound he would have found the words on the label were not sufficient intimation to the customers, but he was bound by those decisions and the summonses would be dismissed. At the same time, that way of doing business was very much to be condemned.—The defendant's solicitor said his client felt the force of his worship's remarks and would alter his labels.

MILK.

At Marylebone, on April 1, J. W. Tomson, farmer, of the Nook, Waltern Ashbourne, Staffordshire, was summoned before Mr. Curtis-Bennett for selling milk adulterated with 11 and 10 per cent. of added water.—The defendant had an arrangement to supply a London firm with pure milk daily. When the milk arrived at St. Pancras on the 11th ult. samples were taken, with the result that it was found to be adulterated.—The defence, on oath, was that the milk was absolutely pure when handed over to the railway company for conveyance. The company would not permit of the churns being locked. The defendant said he was a guardian of the poor, an overseer, and a member of a district council, and would not stoop to commit such an offence. He felt that the law pressed heavily upon farmers in making them responsible for their goods after they had left their custody.—Mr. Curtis-Bennett, in reply, said that somebody must be held responsible, or the public in London would suffer seriously. He fined the defendant £4, with £3 7s. costs.—Harry Perry, 16, Malden-road, Kentish Town, and Joseph Evans, 57, Leighton-road, were each fined 40s., with 21s. costs, and William Martin, 156, Prince of Wales's-road, and Thomas Jenkins, 38, Hartland-road, were each fined 40s., and 23s. costs, for similar offences.—William Phillips, of York-rise, was ordered to pay a like penalty for selling milk with cream abstracted to the extent of 14 per cent.

At Liverpool, on April 1, Mary A. Raven, who resided in Eaton-place, was summoned for refusing to sell a sample of milk from a float in the street for the purpose of being analysed. The defendant did not appear. A warrant was issued on Wednesday evening, and she was brought before Mr. Stewart yesterday for not obeying the summons.—Mr. Stewart fined the defendant £5 and costs, or a month in default.

At Dorking, on March 30, a milk contractor, named Bowry, of Dene-street, was summoned for selling new milk, 20 per cent. deficient in butter fat.—Mr. Scales appeared for defendant, and pleaded not guilty.—Cecil Eveleigh said on March 4, at 9 a.m., he purchased a pint of new milk from Mrs. Bowry at the house in Dene-street. He gave the milk to Mr. Kyle.—Mr. Kyle deposed to dividing the milk into three parts, one of which was analysed by Dr. Stevenson, who certified that it was 20 per cent. deficient of butter fat.—Cross-examined: He had been to the shop three times before, and had found the milk all right. Defendant was always willing for him to take samples. Milk deteriorated in butter fat when kept standing in a churn and being constantly ladled out, so that the milk at the bottom of the can would not be so pure as that at the top. The deficiency in question was very serious.—Mr. Scales contended that the milk was only .64 below standard, it was an accident that defendant could not help. The milk was brought fresh from the farm every morning.—Fined 2s. 6d., and costs 14s. 6d.

MARGARINE.

At Wigan, on April 2, Thos. Kelly, wholesale butter dealer, Weston-street, Bolton, was summoned for selling butter to the prejudice of the purchaser. Mr. Parkinson prosecuted on behalf of the Royal Lancashire Agricultural Society, and said that he gave instructions to a shopkeeper named Lyon, of Spring-view, Lower Ince, to purchase a quantity of butter from the defendant. Lyon asked for six pounds of Kiel butter at 9d. a pound, and defendant's agent, named Crow, served him with a substance which was proved to contain 65 per cent. of foreign matter. The mixture was worth about 4½d. per lb. Mr. Foley, of Bolton, who defended, said that defendant was an undischarged bankrupt, and was acting as a traveller for his wife, who was in the butter trade. He urged that the man named Crow was responsible for Lyon being served with the article in question. The Magistrates imposed a fine of £20 and costs. Mr. Foley asked that defendant should be allowed time to pay the amount. Defendant admitted that he had been fined at Bolton for a similar offence. Defendant was ordered to pay £5 down, £5 next week, and £3 a week afterwards until the fine was paid off, in default two months' imprisonment.

At Wrexham, on April 5, Frederick Langley, provision dealer, Rhosddu, was charged with a breach of the Food and Drugs Act.—Deputy Chief-Constable Jones stated that he visited the defendant's shop and asked for a pound of salt butter. On being analysed it was found to contain 37 per cent. of fat other than butter fat.—The defendant said the mixture was bought and sold as margarine, but, unfortunately, he was not at home when the Deputy Chief-Constable called, and his assistant made a mistake in supplying him with the margarine in response to his request for salt butter.—A fine of £2 and costs was inflicted.

At the County Hall, Wrexham, another provision dealer, living at Rhosddu, but just outside the borough boundaries, named Sarah A. Dodd, was charged with neglecting to label some margarine in her possession.—Deputy Chief-Constable Jones said on March 3 he visited defendant's shop and asked for a pound of salt butter, with which he was served. When analysed, it was found to contain 85 per cent. of fat other than butter fat. The mixture supplied to him was not labelled "margarine."—Defendant's husband said the wind had blown the label off.—Defendant was fined £2 and 19s. costs.

At North London, on March 31, Joseph Belstead Smee and Frederick Fairaday Smee, cheesemongers, of Boleyn-road, Stoke Newington, were summoned by the local Vestry for exposing for sale margarine which was not so labelled according to the Margarine Act. Mr. Webb, vestry clerk, called evidence to prove the purchase, and also the admission by the shopman that it was margarine, and accidentally not labelled. Mr. Cluer inflicted a fine of £5.

In the Summons Court, Belfast, on April 6, before Mr. Hodder, R.M., a man, who gave his name and address as Thomas Beggs, Greengrave, Dundonald, was summoned for having, on February 15 last, carried margarine about the city and sold it for print butter. Market Inspector M'Master afterwards searched for Thomas Beggs at Greengrave, but no such person could be found. On the 23rd ult. the case was brought before the magistrates, and the police were instructed to find the man if possible. Since it has been discovered that the proper name and address were Thomas M'Fall, 38, Brussels-street. The defendant, who was represented by Mr. J. H. Riordan, pleaded guilty. Evidence having been given, defendant was fined £5, or, in default, two months' imprisonment.

At Glasgow, on April 5, John Paterson, 91, Rosebery-street, was charged with having sold to a sanitary inspector half a pound of butter which contained 94 per

cent. of fatty matter not derived from milk. He pleaded guilty. Mr. John Lindsay, interim clerk of police, who prosecuted, said this was the case of a grocer's shop where customers went in and asked for half a pound of butter, and got from the shopman what purported to be butter, but it was ordinary margarine. Sheriff Balfour imposed a fine of £4, with 30s. of expenses.

UN SOUND FOOD.

At Birmingham, on April 2, William Bailey, kawker, Bloomsbury-street, was summoned under the Public Health Act, for having eight rabbits and 466 herrings which were unfit for food exposed for sale on a truck in Rocky-lane.—On February 24, Inspector Hothersall met the defendant wheeling a truck in Rocky-lane. He had sixteen rabbits on the truck, eight of which were good, and the others bad. There was also a box containing 466 herrings on the truck, and these were bad.—Defendant said he was going to sell the fish and rabbits at Aston. He admitted the herrings were bad, and said that had he opened the box before purchasing the fish that morning he should not have bought them.—Mr. Hiley pointed out that defendant was liable to a fine of £20 for each of the rabbits and herrings seized by Inspector Hothersall and condemned by Mr. Brame, or nearly £10,000 in all.—The Bench said the sale of bad food to poor people must be stopped, and imposed a fine of 40s. and costs.

ROTTEN BANANAS.

At Thames, on March 31, Henry Nathan, a costermonger, was summoned before Mr. Mead, for having a quantity of bananas which were bad and unfit for food.—Mr. J. Bullock, Sanitary Inspector to the Poplar District Board of Works, had his attention called to the bananas, which were exposed for sale on a barrow in Crisp-street. They were examined by the Magistrate at this Court, and afterwards destroyed.—The defendant said 500 bundles of similar bananas were bought by costermongers of Messrs. Draper and Sons, Covent-Garden.—In reply to the Magistrate, Nathan said he had 25 bunches of bananas, and they cost £2 17s. 11d. The best sold at two a penny and the worst at four a penny. He maintained that the bananas were fit for human food. They were black, but not rotten.—The Magistrate said he saw the bananas, which were disgusting things. They were perfectly rotten, and if defendant sold them he sold poison. He would have to pay a fine of 40s. and 2s. costs, or in default of distress 14 days' imprisonment.

"YORK" HAM.

At Worship-street, on April 6, Mrs. Elizabeth Watts, a widow, trading as a provision dealer at 444, Bethnal-green-road, was summoned before Mr. Corser to answer two informations for "applying" a false trade description to a certain article—a ham—sold by her, and for selling a certain article—a ham—to which a false trade description had been applied.—Mr. Morton Smith, instructed by Mr. W. T. Ricketts, conducted the prosecution; Mr. Voss, solicitor, defended.—The proceedings were taken under the Trade Marks Act, and it was said that this was a first case of the kind, the object being to prevent the sale of foreign hams as English. The ham in question was sold to an Inspector of the Ham and Bacon Curers' Association of Great Britain and Ireland as a "York" ham at a price of 10d. per pound. It was pointed out in the witness box by the inspector, John Moore, that the ham in question had been "got up" to represent a York ham. It was white; it

showed the flour in which York hams were cured, and it was invoiced to the inspector as a "York" ham, but it was not so labelled in the shop. It was, however, Canadian meat and American cured.—Price, a manager to Messrs. Hudson, provision merchants, said that the retail price of such was 8d. per lb., but a "York" ham price was 1s. or more per lb.—Mr. Corser inquired if "York" hams were not prepared elsewhere than in Yorkshire, and the witness said that in contiguous counties or places the practice was to imitate, but it was done with English meat.—The defence was that the sale was made by a shopman without authority, but, after some argument, Mr. Corser held that the defendant was liable, and fined her 20s. and two guineas costs.

A PASTRYCOOK AND UNSOUND CONDENSED MILK.

At Lambeth Police-court, on April 2, William H. Austin, a wholesale pastrycook, of Kennington Park-road, was summoned at the instance of the Lambeth Vestry for having deposited on his premises for the purpose of preparation for sale 75 tins of condensed milk which were unsound and unfit for the food of man. A sanitary inspector in the service of the Lambeth Vestry said he visited the defendant's premises on March 12, and noticed some tins of condensed milk, without labels, which were "blown." He went into the bakehouse and saw 18 tins of condensed milk on a tray, three of which were open. Outside the bakehouse he noticed two wooden pails containing custard mixed ready for use, and inside the bakehouse he saw a number of custards, baked and unbaked, and a large quantity of cakes. There were a large number of empty condensed milk tins of the same description as the others. Four men were engaged in the bakehouse making pastry, and one of them, referring to the tins, exclaimed, "We are not going to use these." He found 595 tins of milk in the store. He opened 75 tins and found them bad. The defendant then came in, and witness said, "You have a lot of milk here that is unfit for human food." The defendant replied, "I am aware that none of it is fit for food. Witness asked him if he was willing to have the remainder taken away and condemned. The defendant replied, "Yes," and witness said it would be unnecessary in that case for him to open any more tins. Witness asked the defendant where the good milk was, and he replied that it had not come in. Witness asked the defendant if he had an invoice for the tins, and he replied, "No, sir, I have not." He was not told that the bulged tins had been put on one side for the purpose of being given to the dustman. For the defence, Mr. Austin, the defendant, said he found Mr. Jones opening tins of milk. The inspector said, "I shall condemn this milk." He replied, "Very well, sir; they are put there to be condemned." His servants had instructions not to use anything that was unfit for food. The tins of milk seized had been put on one side, and were intended to be carted away by the dustman. Custards were made by the night men, and no custards were being made at the time of the inspector's visit. George Barrington, the defendant's foreman, denied that at the time of the inspector's visit there were any "bulged" tins in the bakehouse. Mr. Austin's orders were not to use any tins of that description. The bulged tins were stored for the dustman. No custards were being made when the inspector called. The pails referred to contained good milk ready for "pound" cakes. Two other men in the employ of the defendant gave similar evidence. At the close of a long hearing, Mr. Denman ordered the defendant to pay a penalty of £10 and £3 3s. costs.

DARWEN.—The corporation have decided to extend the use of Polarite at their sewage works, and four additional filters are now to be laid with Polarite.

DISEASED MEAT IN GLASGOW.

At the Eastern Police-court, on April 2, Bailie M'Phun presiding, Alexander Gardiner, sen., butcher, 74, King-street, Calton, was charged, at the instance of Mr. T. D. Young, meat inspector, Glasgow Sanitary Department, with having exposed for the purpose of sale or preparation for sale, in his shop at above address, on March 26, 5½ cwt. of flesh meat which was unsound and unfit for human consumption.

Mr. George Neilson, procurator-fiscal, appeared for the prosecution.

Accused pleaded guilty.

The Fiscal requested that the Bench should not record the plea as the facts were of such a nature that they should be brought out in proof.

Accused: I can't say anything but that the beef was found in my shop. I plead guilty. My meat was condemned and taken out of the shop last Friday morning. The cow was killed in Rutherford slaughter-house the day previous.

The plea of guilty was ultimately accepted, but the Bailie requested that Mr. Young should be heard in a case of so serious a nature.

Mr. Young, inspector, stated that Police-inspector John M'Lennan and he visited the accused's shop, when they found him occupied in removing diseased parts from the carcass of a cow which had suffered from generalised tuberculosis. These parts were soft, extremely lean, watery, and emaciated, besides being diseased. Even to the unpractised eye the meat would at once be known as unfit for human food. There was no fat whatever. Besides this carcass there were portions of other two carcasses which bore evidence of the same disease, and a quantity of meat cut up ready to mince as well as minced, the latter being almost putrid. A further quantity was found in a basket covered up, which appeared to be the stomach or tripe of the newly-killed cow, and which was completely covered with tuberculosis. The beef would never have passed in any public slaughter-house.

Examined by the Magistrate, the witness said that accused on being questioned stated that times were hard; he was getting no prices, and could not afford to give good stuff.

Dr. Arch. K. Chalmers deposed to examining the meat in the Eastern Police Office. The meat seemed to be from different animals; there were a lot of parts all dry and emaciated, and evidently portions of emaciated cows. The meat was diseased, unwholesome, and unfit for human consumption. The pieces of the newly-killed animal and also the older one showed tuberculosis, and there were deliberate signs of dressing in all, especially in the case of the older one. This had been done for the express purpose of lessening the chances of detection. A part of the older carcass was putrid.

Accused: I have pleaded guilty, and I don't see why this man should give evidence. (To witness): What experience have you of beasts? You are only a doctor. I have been 40 years in the East End, and this is the first time I have been up.

Mr. Neilson, addressing the Bench, said that, judging from the papers in his hands, and the information lodged, this was the worst case of diseased meat seizure that had been made in Glasgow during his term of office as prosecutor. The essential fact of the case was that accused had a class of very bad meat in his possession. The meat, apart from the question of tuberculosis, was too bad for human food, but it consisted largely of tuberculosis. He contended that Gardiner should be sent to prison without the option of a fine. Until such a course was proceeded with the sanitary authorities could not effectually strike at the low-class butchers who were sometimes detected in such dealings as had been explained by the evidence. The present was a particularly bad case, and he knew

of no reason why he should not submit his contention for the consideration of the Magistrate.

The Magistrate (to accused): Did you not buy the meat?

Accused: No, I did not. I had a man in the shop at 26s. a week, and when he bought the meat I was at Ayr, Stranraer, and other places looking after cattle.

The Magistrate: This is a most serious charge.

Accused: Yes, it is a very bad case, and I am sorry for it.

Bailie M'Phun: It is my opinion that the public of the East End are least able to protect themselves. I do not think that such a state of matters could possibly occur in the West End; it would not be tolerated for a day. The shop-keeper who was guilty of such harmful and illegal proceedings must have expected to reap an extraordinary profit.

Accused: No, your honour; the beef sold at 3d. and 4d. per lb., bone and all.

The Bailie: I was not at first inclined to give you the option of a fine. Seeing, however, that this is your first offence, I will not send you to prison. You are fined £20, with the option of 60 days' imprisonment, and remember that if you are convicted again you will be sent to prison without the option of a money penalty.

MEAT.

At Clerkenwell, on April 5, H. Trenter, cattle dealer, of 41, Elliott-street, Ipswich, was summoned for depositing on February 12, at a meat salesman's premises in Cow-cross-street, two sides of beef, two kidneys, and one tongue, which were diseased. Mr. Matthew Hale prosecuted, and Sanitary-inspector Billing, of the Holborn Board of Works, proved the offence. It was alleged that the defendant bought six beasts at an auction, and had them slaughtered at the London market. Five good bodies were sent inside Smithfield Market, but this bad meat was sent to premises outside the market. It was "grapy," and diseased with tuberculosis. Defendant, who denied any knowledge of the disease of the animal, was fined £15.

AN EXTRAORDINARY CASE.

At West London, on April 1, Messrs. Aldridge and Charman, grocers, of 185, Lavender-road, Battersea, were summoned, at the instance of the Battersea Vestry, for selling as arrowroot an article containing 100 per cent. of borax, and as sago an article containing 100 per cent. of tapioca.—Mr. W. W. Young, who prosecuted for the Vestry, said the defendants had acted, to put it mildly, with extraordinary carelessness. One of the Vestry's officials visited the shop in the ordinary round of inspection, and asked for some arrowroot and tapioca. He was served, and the articles were analysed, with the astonishing result that neither article turned out to be the article asked for. As regards the borax he (Mr. Young) would not like to say what the result might have been had such an article found its way into a pudding instead of arrowroot—probably the death of some child. It was in his opinion a most wicked negligence on the part of the defendants.—The defence was that both the defendants were away at the time of the purchase, and the young assistant had failed to distinguish the articles.—Mr. Francis said it was a case of gross negligence. He inflicted penalties amounting to £6 15s., including costs.

COFFEE.

At Cheltenham, on March 26, Elizabeth Morgan, of No. 4, Suffolk-parade, was summoned for selling adulterated coffee, on the 2nd inst.

P. C. Allen proved purchasing half a pound of the commodity, which he sent to Mr. Embrey, the county analyst, who found it to contain 20 per cent. of chicory. Witness asked for coffee, but on telling the defendant he intended having it analysed, she said the coffee had been "mixed," though not by herself.

The Bench fined defendant 10s. and costs.

CHEMISTS AND THE SALE OF POISON.

At Heywood, on March 31, William Hamer Mills, chemist and druggist, Market-street, Heywood, was charged under Schedule A of the Pharmacy Act, 1868, with selling poison—to wit, strychnine—to one Emily Harriett Saunders, who was then a person unknown to him, and who was not introduced to him by some person known to him.—Superintendent Noblett conducted the case for the prosecution, and stated that on the morning of March 20 Miss Saunders, who was a domestic servant, living at Castleton, but whose home was at Burns'-buildings, Chadsmoor, Cannock, Staffordshire, went to Mr. Mills' shop and purchased some vermin killer which contained strychnine. Mr. Mills did not know her, and in the column in his registration book where the name of the person who had introduced the woman to him ought to have been his own name appeared. After the woman got the poison she returned to Castleton, and during her journey by train swallowed the preparation, and death took place some time later. Mr. Mills was a witness at the inquest, and in consequence of his admissions the coroner (Mr. Molesworth) had laid an information against him, and this action was the result.—Mr. Mills pleaded guilty, and stated that the woman went into his shop and asked for rat paste. He had none, and therefore could not supply her. Had he been able to supply her she would have been able to poison herself, but he would then not have been incriminated. Rat paste was quite as deadly a poison as vermin killer, but it did not come under the schedule of the Act. Chemists when they sold vermin killer did not usually insist upon the purchaser having a witness with them.—Dr. Torrop, one of the magistrates, said it was essential that the Act should be carried out. By placing an obstacle in people's way serious consequences could be avoided. He hoped the present proceedings would act as a warning to other chemists.—Defendant was fined 10s. and costs.

FIG SYRUPS.

In the High Court, on March 31, the case of the California Fig Syrup Co. v. Taylor Drug Company, Limited, was heard.—Plaintiffs asked for a perpetual injunction to prevent defendants passing off their goods as being the plaintiffs' goods. The plaintiffs, who were an American company, were large vendors of a medicinal liquid or preparation called syrup of figs. Their fig syrup was manufactured in America, and was sold in this country by means of a depôt here.

His Lordship, in giving judgment, said that unless one asked for "California" syrup of figs he could not be sure of getting the plaintiffs' fig syrup. If defendants had taken the name of some other State of the United States they would have been entirely clear of all complaint, but they had taken the name "American," and the plaintiffs' manufacture had come to be known on the market as the only fig syrup which was imported from America and sold here. Accordingly his Lordship granted a perpetual injunction restraining the Taylor Drug Co., Limited, from passing off, or attempting to pass off, any preparation not being the goods of the plaintiffs by the use of the words "The American Syrup of Figs."

THE SALE OF FOOD AND DRUGS ACT IN LEEDS.

Mr. J. FAIRLEY, City Analyst, reports on analyses made for the City of Leeds during the quarter ending March 31, 1897, that the samples received have been:—Milk 33, skim milk 2, butter 7, flour 3, tinned peas 1, tinned beans 1, arsenical soap 1; total 48.

Three of the samples of milk were adulterated with 22, 18½, and 10 per cent. of water respectively, as compared with the lowest quality of natural milk, and 10 samples were reported as of low quality. Five of the butters were adulterated with 86, 71, 67, 52, and 51 per cent. of foreign fat respectively. The tinned peas and beans were adulterated with copper, equal to 2 and 1½ grains of copper sulphate per pound, respectively. The arsenical soap did not contain any arsenic.

A MODIFICATION OF THE BABCOCK METHOD.

BULLETIN 31, from the experiment station at Orono, describes a modification of the Babcock method and apparatus for testing milk and cream. This modification consists chiefly in filling the bottles with hot water after the milk or cream and acid are added, and before they are whirled in the machine. In this way the separation is completed with one whirling, and time thereby saved. The Bulletin is by J. M. Bartlett, chemist of the station.

SOUTHWARK SANITARY PROSECUTION.

BEFORE Mr. Wyndham Slade, the Metropolitan Industrial Dwellings Company, of Connaught-mansions, Victoria-street, Westminster, appeared, on April 1, to eight summonses under the Public Health (London) Act, upon the complaint of the St. Saviour's District Board of Works. The summonses were for failing to comply with statutory notices for the abatement of a nuisance injurious or dangerous to health, in regard to the alleged insanitary condition of eight blocks of model dwellings, comprising 190 tenements known as Mowbray-buildings, Redcross-street, Borough.—Mr. F. Dodd appeared to conduct the prosecution, Mr. Macmorran, Q.C., was for the defendant company.—In opening the case Mr. Dodd stated that these buildings had 681 inmates, and, owing to their sanitary defects, lack of ventilation, light and air, and the dirty habits of many of the inmates, the buildings had long been a source of great anxiety to the local authorities, particularly in view of the fact that the death-rate of the buildings was 37·8 per 1000, as compared with 22·9 per 1,000 for St. Saviour's district, and 19 per 1,000 for the rest of London. When dwellings of this kind were crowded with inmates, and surrounded on three sides with high buildings, it became emphatically necessary that the sanitation should be of the best, but he would show that in this instance it was of the worst. At the very doorstep of each block was what was called an "intercepting chamber" connected with the drains, but it was really an unventilated cesspit.—Mr. Macmorran objected that, under the present summonses, only the general condition of the buildings could be considered, and specific nuisances, of which the defendants had had no notice, were not within the scope of the prosecution. If the magistrate proposed to go into details of that kind he would ask for an adjournment, in order that he might apply for an order of prohibition.—Dr. Herron was called as the first witness, but before he was sworn Mr. Macmorran stated that he should not cross-examine until the objection which he had raised was decided by the High Court.—The Magistrate said it was hardly worth while to begin evidence under these circumstances.—Mr. Macmorran undertook to apply for a rule at the earliest possible opportunity, and upon that understanding the further hearing was adjourned.

GRAVE ALLEGATIONS AGAINST THE SANITARY INSPECTOR OF EPSOM RURAL DISTRICT COUNCIL.

MR. WALPOLE, Banstead, attended the last meeting of the Council to protest against a bill he had received from Mr. Keal for conveying his nephew to the Highgate small-pox hospital. He (the speaker), although living 60 feet out of the district, prevailed on Mr. Keal to take the patient to London. A few days later he received a bill from Mr. Keal amounting to £8 5s., for taking the patient a distance of 25 miles. The items were as follows: £3 15s. for hire of a pair of horses, 18s. for refreshments, £1 for disinfecting, which, he said, was not done, as he disinfected the house himself three days later, and £2 2s. as a "tip" for himself. £4 of the amount was literally tips for the Council's officers. The account was his brother-in-law's, and he had asked him to get it cut down. Had it been his own, he would have paid it, and told the man to go to the devil ("Oh!"). There was another matter he wished to call attention to. When his nephew was taken to the hospital, he gave Mr. Keal £5, believing that was the admission fee to the hospital. Mr. Keal, however, brought him back a receipt for £5 5s., saying that the charge was 5s. extra, and he had paid the money out of his pocket. Five weeks later, he had occasion to go to the hospital for his son's clothes—his son having caught the disease and been taken to the hospital—and when there he asked the doctor if he owed anything. He said, "Only the 5s. balance of the bill." He was surprised, to say the least, as Mr. Keal had told him he had paid the money; but he paid the doctor the 5s. Mr. Keal had stolen the money, and had not reckoned on his going to the hospital and finding him out. He thought the charge for the horses exorbitant, and wished to know how he came to be charged 18s. for refreshments. He would not pay the bill without some explanation.—Mr. Keal said after receiving the message from Mr. Walpole, he took the ambulance round, and found the house was out of his district. He explained that to Mr. Walpole, who was very excited, and said he would give £1,000 to have the case moved. He accordingly yielded and took the boy. He asked for a cheque for £5, which he gave to the medical officer, who gave him a receipt for £5 5s., and told him to send the balance on. He (the speaker) disinfected the ambulance before he left, paying a man 2s. to help him. Then he took the nurse, who went up with the patient, to Manchester-square, where they refused to take her in. He, however, eventually got rid of her, and arrived home about 11.30 p.m., having been away since 9 a.m. The next morning he went to Mr. Walpole, and gave him the receipt for £5 5s., and he gave him the extra 5s., he (the speaker) stating that he would send it on. When he saw Mr. Walpole with regard to the bill, he was very insulting (Mr. Walpole, excitedly: "That's a lie!") especially with regard to the 18s., asking him whether he had a champagne lunch. As he "cut up so rough," he made up his mind that until he paid the bill he would not pay the 5s. The speaker read a letter from Dr. Williamson, in which that gentleman said he was asked by Dr. Mair to compliment him on his promptness in removing the case. Continuing, he said the bill included £3 15s. for hire of horses from Mr. Bristow's, which he did not consider excessive at all. As to the 18s., that was spent on refreshments for the day for himself, the coachman and the nurse. He had had fourteen years' experience in cases of infectious diseases, and he had never been complained of before—quite the reverse. He considered he was the person aggrieved. He thought he was entitled to charge the £2 2s., as the case was out of his district, and he was put to a lot of trouble.—Mr. Walpole was proceeding to explain further, when Mr. Shaw interrupted by saying that he thought they had heard enough of the case (hear, hear).—Mr. Walpole: He had nothing whatever to do with

the nurse: she had plenty of money, and went to the Nurses' Home.—The Council then discussed the question.—Mr. Jay said their officer no doubt undertook the case with the best of motives. He acted in a very humane way (hear hear), and he failed to see that the amount charged was excessive. In fact it was a moderate charge, considering the exceptional circumstances of the case.—The Chairman said Mr. Keal had no right to send in accounts at all. The bills should be sent into the clerk, and approved by the Council. He had broken his agreement in both instances, and he (the speaker) should be inclined to take strong measures.—Mr. Stuttaford said Mr. Walpole had deliberately charged Mr. Keal with fraud. He had overstepped the mark in sending in the account, but he thought he did it with the best intention.—The Chairman: It appears to me that he is not really fit to be our officer at all.—The Clerk said he was not aware Mr. Keal had sent in accounts before. He had removed no cases since he had been their officer.—Mr. Jay said that as an honourable man Mr. Walpole ought to pay an honourable debt, and as to Mr. Keal's action a severe reprimand would meet the case.—The Clerk said the Council had struck the £2 2s. out of the bill.—Eventually, on the motion of Mr. Jay, seconded by Mr. T. J. Bennett, it was decided that the Council considered £6 3s. a reasonable sum to pay, but considered that the bill was purely a matter between Mr. Walpole and Mr. Keal.—The Chairman conveyed this decision to Mr. Walpole, and explained that Mr. Keal should not have sent in the bill.—Mr. Walpole said the 18s. stuck in his throat, as did also the string of falsehoods told by Mr. Keal.—Mr. Walpole wrote out a check for £6 3s., and remarked as he left the room, "We will see what magistrates can say about an official stealing 5s."—Mr. Keal was then called in, and the Chairman said they considered his conduct very unsatisfactory, and deserving of a severe reprimand. In future, he must submit all bills to the Clerk, and if he acted in the same manner again, the Council would deal very seriously with the matter.

NORFOLK TOWN COUNCIL AND ADULTERATION.

THE Public Analyst reported that during the quarter ending March 25, 1897, he had analysed 36 samples, and found 35 genuine. No case of adulteration of food occurred during the quarter, but one of drugs, namely, a sample of tincture of rhubarb, quite deficient of saffron, which is ordered to be used by the British Pharmacopœia. The percentage of adulteration for the year was 5, which was lower than ever before.

GAS COMPANIES AND THE PUBLIC HEALTH.

IN the House of Commons on April 1, Mr. T. Healy asked the Home Secretary whether he was aware that the large English gas companies were now making large quantities of water gas and turning it into the mains with coal gas, so that some cases of gas poisoning had already occurred, and would any means be taken to protect the public against the admixture of this most poisonous substance with coal gas. Mr. Ritchie, who replied, said: "I am not aware that any cases of gas poisoning have occurred in consequence of the practice to which the hon. gentleman refers. If the hon. member will supply me with particulars as to any such cases, I will cause inquiry to be made."

Perhaps the *Gas Adder* can throw some light on this dark subject.

CONDITION OF GOOLE WATER.

THE serious condition of the Goole town's water, which is highly discoloured and full of an iron sediment, was discussed at a meeting of the Council on March 25.

—Mr. Huntington said that it was worse than ever last Sunday, and asked what steps were being taken to remedy the same.—Mr. Claybourn remarked that the committee were doing their best, and that they were flushing six days a week to clear the pipes of scour.—It was a new supply, and would require to settle.—Mr. Cawthorn contended that there was nothing deleterious in the water.—Considerable feeling exists locally on the matter, and the election is to be fought on the subject.

THE PUBLIC HEALTH (SCOTLAND) BILL.

THE Public Health (Scotland) Bill is one intended to codify the law relating to public health in Scotland. "By common consent," says the *Westminster Gazette*, "it is non-contentious, but (1) it is of enormous length, consisting of 125 clauses, and (2) it deals with matters in which Scotchmen alone can be expected to take any real interest. This being so, Dr. Farquharson made the very reasonable proposal that the Bill should be referred to a Select Committee consisting of (a) the seventy-two Scotch members, together with (b) fifteen other members nominated by the Committee of Selection. It would have been possible with these additional members to get a Unionist majority on the Committee, and in this way maintain the tradition that each committee must reflect the party feeling of the whole House. But the Government—frightened, as Sir Robert Reid pointed out, by the prejudices arising from the Home Rule controversy—refused to accept the motion, and insisted on referring the measure to the Standing Committee on Law, on which at the best there will only be twenty-three Scotch members out of a total of sixty-two. The forty-nine remaining Scotch members who want to discuss the Bill are excluded to make room for thirty-nine English, Welsh, and Irish members who do not want to. It is really difficult to know of any valid reason why the details of a non-controversial Bill of this kind should not be settled by Scotchmen themselves, and it is as pedantic as it is unwise to refuse them the right to do so."

GROCERS' FEDERATION COMMITTEES AND MR. KEARLEY'S BILL.

THE Bill to consolidate and amend the law relating to the Sale of Food and Drugs, introduced by Mr. Hudson Kearley, M.P., was discussed, and the following resolution was proposed by Mr. Councillor Jarvis, and seconded by Mr. Collis Clark, and agreed to:—"That the Committee, having considered this Bill, find with surprise and regret that several of its clauses are most unjust to the retail grocery, provision, and oil and colour trades, and therefore recommend that the strongest possible opposition be offered to it. The Committee note that, whilst the Grocers' Federation has for the past five years made strenuous efforts to secure an amendment of the present laws on the subject, which resulted in the introduction of the first amending Bill by Sir Chales Cameron, M.P., through whose splendid efforts for the trade the recent Select Committee was appointed, and though before that Committee the Grocers' Federation witnesses were the first to recommend the appointment of a Board of Reference, Mr. Kearley's Bill does not make any provision for retail grocers, provision dealers, and oilmen to be represented upon that Board. This, in the opinion of the Committee, is most surprising, when it is remembered that the practical knowledge of the retail trade renders them so well fitted to assist such a Board, and that the retailers are more affected by these Acts than are any other class of traders."

Mr. Clark moved, and Mr. Shirley seconded, and it was resolved that a copy of the above resolution be sent to Mr. Balfour and Mr. T. W. Russell with a further respectful request to these gentlemen that the Government should without delay introduce the Bill promised by the Government on the subject.

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Cooks, Confectioners, and the Public
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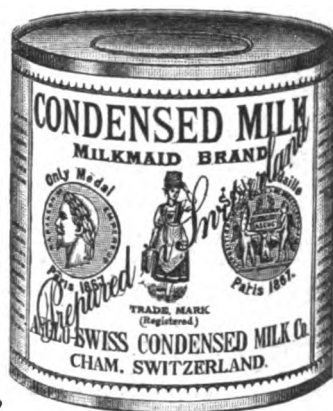
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Food and Sanitation.

SATURDAY, APRIL 24TH, 1897.

CIVILISATION IN THE NINETEENTH CENTURY.

WE often wonder how it happens that so many charitable and well-meaning people waste money and energy in missions to convert Jews, Indians, Chinese, or niggers, and close their eyes to the magnificent field for labour offered in civilised London and in well-nigh every part of the United Kingdom.

The following is not an effort of the imagination—it is the matter of fact report of the Camborne Sanitary Inspector, Mr. J. Williams.

"In a quarry at the back of the United Methodist Chapel there was a man, wife, and four children, aged 17, 11, 8, and 5, in one bedroom. In another case in the same quarry, two men and two women, a young man of 18 and a girl of 16, occupied one bedroom. At North-road there was a man, his wife, and six children in one bedroom. In Adelaide-street there was a case of a man, his wife, and eight children, between the ages of 4 and 18 years, in one bedroom. In the same street a father, mother, grandmother, and four children, aged 18, 16, 10 years, and 18 months in one bedroom. At Brea, a man, his wife, and seven children occupied one bedroom. In Carnarthen-street there was a man, his wife, her mother, and five brothers and sisters, ages varying from 11 to 25. In two bedrooms at Carn Entral, there were two cases of a man, his wife, and four children in one bedroom, and a case of a man, his wife, and three children, 17, 15, and 12, of mixed sexes, in one bedroom. Another case at Carn Entral was that of a man, his wife, and 10 children, six boys and four girls, from nine months to 19 years of age, twelve in family, occupying one bedroom. The 11 cases reported shewed 42 adults and 42 children in twelve bedrooms.

This sickening picture of conditions, which every investigator knows produce the most horrible offences against morality, and degrade men, women and children below the level of any beast, can be paralleled in scores of places. To properly house and insist upon decent conditions for such abject persons would cost some money, so they wallow in vice, grow up in ignorance, and compel us to spend a score times the amount in law, workhouses, and prisons which it would have cost to transform these people from wild beasts into useful citizens. If philanthropy ever touches them it is the philanthropy of the Price Hughes and Ormiston Chant order, which secures advertisement for itself at any cost to others. It might ever be that amongst the fools, or worse, who are wasting their twenty guineas or more for seats to view the Jubilee procession, there might be found some who own these uncivilised dwellings Camborne's inspector describes in so matter of fact a manner. Happily, the sanitary inspector is abroad, and the more thoroughly he realises his duty and proclaims the existence of abominations like these at Camborne the sooner will well-meaning subscribers to the horde of swindling missionaries recognise that their wealth would be better employed in civilising the uncivilised parts of our own land.

BREWERS' BARRELS AS MEASURES.

IMPORTANT LEGAL DECISION.

AT the Newcastle County Court on April 6, before his Honour Judge Jordan, a sequel was heard to some police-court proceedings which raised a point of very great importance to brewers under the Weights and Measures Act, 1878. The plaintiff was Mr. Henry Spencer, brewer, Trent Vale, for whom Mr. B. C. Brough (instructed by Messrs. Paddock and Son) appeared, and the defendant, Joseph Till, labourer, Newcastle, until recently a beerhouse keeper, who was represented by Mr. A. E. Bell. The claim was for £35 8s., beer sold and delivered.

Mr. Bell applied for an adjournment on the ground that the further particulars for which he had asked had only reached him that morning, and he had been unable to get up his case fully, or to prepare a counter-claim.

His Honour said he would grant an adjournment if he thought it was necessary as the case proceeded.

Mr. Brough stated that the complainant was until recently the owner of the Clarence beerhouse, Newcastle, of which the defendant was then tenant. The beer was supplied personally by the plaintiff and his

man between January, 1895, and December, 1896. Counsel went on to call attention to the Weights and Measures Act, 1878, and said for many years no attempt was made to bring brewers' barrels under the operation of the Act. In December last a novel prosecution was initiated at Swindon, and the magistrates held that barrels were measures within the meaning of the Act. The plaintiff had been pressing the defendant for a bill of £43. Immediately after the Swindon decision became known the defendant called in the local Inspector of Weights and Measures as an easy and ready way possibly of liquidating a debt. A test case was taken in the Borough Court, and the plaintiff was summoned for using three barrels as measures which were unstamped and which were unjust. The charge of using unstamped measures was withdrawn at the request of the magistrates, and for using unjust measures nominal penalties were imposed. The plaintiff had not charged for the beer in the barrels which had been condemned, but had deducted £5 8s., the amount due for it from the account. He had made a further reduction, in all taking £7 12s. off the account in the hope of avoiding litigation.

Plaintiff was called to prove the delivery of the beer.

In cross-examination he said the Clarence was the only public-house he supplied with beer. He had about fifteen barrels in use, and six or eight were usually at the Clarence Inn. The three barrels which had been condemned contained a little over 34 gallons instead of 36. He charged 1s. a gallon, and had debited the defendant with 36s. for each barrel. He was not aware that the other barrels were also short, and he had never received any complaints from the defendant. He could not tell how often the three barrels had been sent to the defendant; but they had been in use the whole time Till had been tenant of the Clarence Inn. He had bought the condemned barrels at an auction sale of Glovers, at Hanley, with others, and he had bought new seven of the barrels which he used at Burton. He had never had the barrels tested; they had done for Glovers and would do for him. The beer was not measured before being poured into the barrels. He took it that the barrels held 36 gallons, and that was what he charged the defendant.

Defendant said he was a labourer earning 18s. a week, and he had no means of paying the amount claimed from him.

His Honour: I thought that would probably turn out to be the case.

Defendant: He never pressed me for the money.

In answer to another question, Till said Mr. Spencer broke his agreement in sending bad beer, which he had had to sell at 1d. per quart.

Mr. Bell said his client did not admit that he owed anything. If he had had time he should have counter-claimed for breach of covenant.

In the course of conversation, Mr. Brough mentioned that the abatement which the plaintiff had made represented 152 gallons of beer.

Mr. Bell said the plaintiff had committed a breach of the covenant, and the contract was therefore void, and he did not see how any balance could be struck. The defendant received 2½ barrels a week; he was at one time earning good wages, his wife did dressmaking, and they were both steady; yet at the end of two years they were in debt.

Mr. Brough pointed out that some of the barrels would probably contain more than they purported to do, and a system of rectification was a custom of the trade.

His Honour said it was not a good custom in law.

Mr. Bell said some of the beer was not saleable, and had to be mixed with Bass's to enable it to be sold. He asked that the plaintiff, having failed to prove his case, should be non-suited.

His Honour said it rested with the plaintiff to show how much beer the defendant had received.

After consulting the Act, the Judge said the case was one of considerable importance and considerable difficulty, and he hoped his ruling would be tested in a higher court. He would give his consent to further proceedings being taken. It was rather curious that the question of brewers' barrels had not previously been tried in a county court. To the best of his judgment anything which was used for the purpose of measuring was a measure within the meaning of the Act. It did not matter whether it was a pint pot or a quart pot—pot, pewter, or wood—if it was held out to the purchaser as containing so much, it was a measure. A brewers' barrel was not merely a receptacle; by usage it had become a measure. Mr. Spencer used it as a measure. There was no evidence that he used any other measure. He had come to the conclusion that the three condemned barrels had been used as measures, and, according to the Act, any contract and bargain made in respect to them was void. Every time there was a dealing with any of the three barrels the bargain would be void. It was impossible to make out how often the barrels in question were used in supplying the defendant. The plaintiff said he could not tell, and he (the Judge) could not tell. That being so, the plaintiff's case could not be made out. Mr. Spencer could not tell to within £5, £10, £20, or £40, what was due to him. It was all guess work, and he (the Judge) could not guess. There must, therefore, be a non-suit.

IS MARGARINE A PERISHABLE ARTICLE?

THIS interesting point arose in connection with a case heard at the Leeds Police-court on April 13 under the Food and Drugs Act. Peter Elliott Allsop, provision dealer, 27, Waterloo-road, Hunslet, was summoned for exposing margarine for sale, on January 23, without a label indicating its nature. Mr. Jolliffe, Deputy-Town Clerk, appeared to prosecute, and defendant was represented by Mr. A. Willey.

Evidence having been given as to an inspector's procuring a sample of the unlabelled margarine, Mr. Willey set up the defence that defendant could not be dealt with, on the ground that proceedings had not been taken within 28 days of the committal of the offence; *margarine, he maintained, being a perishable article* in this case and the Louth case *Buckler v. Wilson*, 1 Q.B., 1896, p. 83, and the judgment of the L.C. Justice in the appeal was cited (*Margarine Act*, 1887). In the Leeds case now reported, the City analyst deposed that the sample then produced by him and left with him by the inspector twelve weeks since, was not decomposed, and on analysis would give practically the same result as it did on the first analysis. On the part of the defendant, however, evidence was given by persons engaged in the trade that weeks and not months should be the period during which margarine could be kept and be fit for consumption.

The Stipendiary, upon the evidence before him, did not decide upon the *general* question as to whether or not margarine was a perishable article within the meaning of the Margarine Act, 1887, and Section 10 of the Amending Act of 1879, but decided that the particular margarine before him was not of a perishable nature, and, under the circumstances, the fine would only be 5s. with ordinary costs, £3 9s. in all.

Leeds Evening Express (Wednesday, April 14, 1897):—

PROTECTING THE PUBLIC.

UNLABELLED MARGARINE.—LEEDS WHOLESALE AGENT FINED.

An interesting prosecution under the Food and Drugs Act was heard at the Leeds City Police-court this afternoon. Charles Horace Green, of 11, Corn-exchange, Leeds, agent for J. Laming and Sons, mar-

garine manufacturers, Rotterdam, was summoned for having in his possession for sale parcels of margarine not labelled as such.

Mr. C. C. Jolliffe, Deputy-Town Clerk, prosecuted, and stated that on March 13 Mr. W. B. Walker went to the defendant's shop, and saw the manager, Mr. Baylis. There were a number of packages labelled "margarine," but nine tubs were found by the inspector in the lavatory, from which the name margarine had been scraped off. Some of the tubs had on the top brown paper resembling half firkins of butter. Defendant came in and said, "I don't know that there is anything wrong. It is not exposed for sale, and we do not sell it by retail. It comes properly labelled, and we sometimes, as in this case, scrape them off

TO OBLIGE OUR CUSTOMERS,

who don't like people to see so many casks of margarine going to their shops, as people might think they were selling it for butter." He asked to be let off with a caution, and promised not to repeat the offence. Mr. Jolliffe added that this case was one of the most serious that had been brought before the Court, as an offence of this kind afforded temptations to retail dealers to commit frauds upon the public.

For the defence, Mr. Peckover said the margarine was not taken to the premises for sale, nor exposed for that purpose, and defendant was unaware that he was breaking the law.

The Stipendiary said he believed the margarine was put in the lavatory with the defendant's authority, and for convenience of supplying customers. He fined defendant £5 and costs, or a month's imprisonment.

THE SPIRIT NOTICE QUESTION.

At Appleby Police Court on April 10, Isaac Robinson, Dun Cow Inn, Brampton Croft Ends, was charged with selling adulterated whisky.—Supt. Smith said that on the 3rd ult. he visited the Dun Cow Inn, and asked defendant for a pint of whisky. Robinson went to a cask and was going to supply him from that, but witness told him he wanted it from the keg in the bar. Defendant supplied him, and witness paid 2s. Witness then told defendant that he was going to submit the whisky to the public analyst, and divided it accordingly. On March 24 he received a certificate from the analyst, who stated that the sample contained nothing injurious to health, but it was 49.9 degrees under proof, and 24.9 below the legal limit. Witness added that he looked particularly for a notice intimating that the spirits were diluted with water, but saw none.—Defendant said he did not put the spirit up in the keg, but there was a notice hanging in the kitchen, outside the bar, which had been there ever since he went to the house.—The Chairman said the notice referred to had always been accepted by the Bench when put in.—Supt. Smith said it was not sufficient now, and he put in a decision of the Queen's Bench to that effect in the case of "Jones v. Thomas." In this case the protecting notice had been put in, and the Magistrates at Pontypridd had declined to convict, but on appeal the Queen's Bench sent the case back to them for re-hearing, and on January 27 a fine of £1 and costs was imposed, Mr. Allen, solicitor, Cardiff, who appeared for the prosecution, stating that "this was a new point decided by the High Court, and it was of a revolutionary kind, it being formerly understood that a notice hung up in a room was a sufficient protection, while Section 6 of the Act of 1879 provided that a good defence could be presented where it was proved that the spirits sold were not more than 25 degrees under proof." After a long consideration in private, the Chairman said they had decided to fine defendant 10s. and costs, and the Bench would like innkeepers to clearly understand that they must keep within the legal limit of 25 per cent. under proof, the notice being of no

good now. In cases where liquor was sold in bottles, labels stating the dilution must be affixed, and where it was sold otherwise there must be verbal notice.

At Kirby Stephen, on April 2, Christopher R. Withers, innkeeper, Warcop, was charged with selling a pint of gin below the legal strength.—Supt. Smith said he visited defendant's house on March 3, and was supplied by Mrs. Withers with a pint of gin, which, on being analysed, was shown to be 50.9 degrees under proof, and so had been unduly diluted with water, having been reduced 15.9 degrees below the legal limit. There was no notice posted in the room where he was supplied with the liquor, and his attention was not called to any notice in another part of the house. Moreover, it had been determined in the Queen's Bench Division that the posting of such a notice in the house was not sufficient. After he had served the summons he saw a notice in the front room, but it was only about two inches square, and was not likely to be seen by anyone present. Even if they did see it many would have been unable to read it without the aid of spectacles.—The defendant produced a printed card which read:—"All spirits sold here are adulterated with water" It had hung in the tap-room for the last twelve years. It was put in the most conspicuous place possible, and where no one could miss seeing it.—Supt. Smith replied that the card produced was not the one he saw, which was much smaller, and differed in the wording, "diluted" taking the place of "adulterated."—The Chairman said that there was not the slightest doubt about defendant having broken the law, as the liquor had been adulterated far beyond the point that the notice posted in his house would justify. He would be fined 5s. 6d. and costs.—Defendant: Then I understand a notice is of no use?—The Chairman: Up to a certain point of adulteration, that is, 35 degrees, but you have gone to 50 degrees.—Defendant: But I suppose I can make it as strong as I like? There will be no conviction for that?—There was no reply.

CHESHIRE FARMERS AND MILK PROSECUTIONS.

A SPECIAL GENERAL COMMITTEE MEETING of the Chester Farmers' Club was held on Saturday to consider the present system of prosecutions for milk adulteration and the railway regulations for the carriage of milk. A sub-committee, in a report on the question, pointed out that a large number of Cheshire farmers consigned milk in tankards to Manchester, Liverpool, and other towns, and they had a grievance with regard to the present state of the law by which samples were taken where a prosecution was intended for milk adulteration. In the first place the person authorised to take samples was not required to take a duplicate sample for the farmer about to be summoned, who knew nothing of any sample being taken—it might be at the other end—and was therefore deprived of all opportunity of checking any analysis that was made. A still greater grievance lay in the fact that it need not be proved that the seller knew the milk had been adulterated. Under the present system, when a farmer delivered milk at a country station, it was, first of all, in the custody of the company at the putting-on station; then it travelled with the guard, frequently to a station where it had to be transhipped, and where it was at the mercy of anyone; then it was put on the train which took it to its destination, where it waited in an exposed place for the purchaser to fetch it. Anyone who wanted milk had only to help himself, and the farmer was liable up to the delivery to the purchaser. The railway companies would not allow the milk cans to be locked, but there was apparently no sound reason why the cans should not be locked at the putting-on station after an examination by the station-master. Moreover, the railway companies would not allow the farmer to book his milk carriage forward, so that the

purchaser should take the responsibility of its safety from the point of delivery. The result of the present arrangement was that respectable farmers in the county were being fined for things which had occurred behind their backs and without their knowledge. The sub-committee recommended that the law should be amended so as to compel the delivery of a sample to the person sought to be charged, that power should be given to lock the cans subject to a suitable check, and that booking milk carriage forward should be allowed. Resolutions were passed to the effect that local members of Parliament be pressed to demand an amendment of the law with regard to prosecutions for the adulteration of milk, that the attention of the railway companies be called to the grave injustice inflicted upon farmers by their present regulations as to the carriage of milk, and that the co-operation of neighbouring Farmers' Clubs be invited in the matter.

MILK.

At Luton, on April 7, Elizabeth Coles, of Slip End, was summoned by Charles Wright, Inspector of Foods and Drugs, for selling milk adulterated with 10 per cent. of water on March 23.—Defendant pleaded not guilty.—Mr. G. Sell appeared to prosecute, and stated that the inspector met a servant of the defendant selling milk in Upper Dumfries-street, and purchased a pint for analysis. Mr. Wright said that on the date named he was in Dumfries-street and saw Arthur Burgess, employed by the defendant, selling milk. He purchased a pint of milk, informing the man of the purpose for which he had taken it. The certificate of the analyst, Mr. A. E. Ekins, stated that there was 10 per cent. of added water.—David Peck stated that he was with the last witness on the date named when the milk was purchased. He then corroborated the evidence given.—Defendant stated that she had not seen the milk, and knew nothing whatever about it.—Arthur Burgess said the milk came from two places. He sold the milk as he got it.—A fine of 10s. with the costs, £1 2s., was imposed.

LARD.

EXTRAORDINARY ADULTERATION CASE.

At Rhyl, on April 13, Mrs. Ellen Wills, Vale-road, Rhyl, was charged with selling lard which had been adulterated. Mr. Rudland defended. Inspector Williams proved purchasing a pound of lard at defendant's shop, and while dividing it was told by the defendant that she had nothing to fear from the result of an analysis, as she had rendered it herself. He sent the lard to the public analyst, who had certified that it was adulterated with 11 per cent. of water; it contained nearly 4 per cent. of membrane, was a very dirty sample, and swarming with bacteria. It was unfit for

food. For the defence it was contended that the police had only prosecuted the defendant for selling lard which was adulterated with water, whereas that was not an ingredient which was injurious. The Bench adjourned the case.

MARGARINE.

At Pontypridd Police Court, on April 7, Jacob Phillips, grocer, Williamstown, was summoned for a breach of the Food and Drugs Act by not having an inch and a half label upon an exposed quantity of butter, and not having wrappers marked "margarine" to sell the same in. Deputy Chief Constable Jones, Pontypridd, said he visited the defendant's shop on the 25th ult., and asked him if he sold margarine. He replied that he did. Witness then asked if he sold the two large pieces on the counter as butter. After some hesitation the defendant said that it was margarine, but there was no label upon it to show what it was. There was a small piece labelled "margarine" behind the counter, and the defendant admitted that was the only label he had in the shop. Witness further asked him if he kept any papers in the shop to wrap around the margarine, and he replied that he had not.—Defendant said that he had not sold the margarine on the counter as butter. It was only the previous day that his assistant opened a tub of margarine to sell to a customer. He did not notice it on the counter.—The Stipendiary pointed out that a person who sold margarine was bound to put a wrapper around it.—The defendant replied that he was not aware of that, although he had been a grocer for the last eight years.—The Stipendiary remarked that this was a very serious offence. For the first offence a person was liable to a fine not exceeding £20, £50 for the second offence, and £100 for the third. This case seemed to be a very bad one, and as if the defendant had been selling the margarine as butter.—The defendant denied this, and the Chairman further remarked that the defendant was not in a position to sell margarine, because he had no labels in the shop or wrappers to pack the margarine in.—The defendant was fined £5 and costs.

At King's Heath, on April 9, John Norris, grocer, of School-road, Ten Acres, was fined £3 and costs for selling butter adulterated with foreign fats to the extent of 85 per cent. Sergeant Griffin proved the case.—The defence was that the manager, who had sole charge of the business, had sold margarine in mistake.

MEAT.

At Ystrad Petty Sessions, on April 12, before Mr. Stipendiary Williams and Alderman W. Morgan, John Gallagher, butcher, Ystrad, was summoned by the

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(This word is Registered, and used as a Trade Mark for Best Quality Articles only, and has now become synonymous with quality for the following specialties.)
"We are of opinion that all the products bearing the guarantee of this name may with equal justice receive our highest commendation."—*The Family Doctor*.

"KURRUWA" DELICIOUS, SOLUBLE COCOA.

Manufactured in England on the popular Dutch principle.

ANALYTICAL REPORTS.

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"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average."

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,
"Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London;
"Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions,
London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d. TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8.

This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

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"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*."

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

Please ask your GROCER or CONFECTIONER for these specialties, see that they are marked "KURRUWA," and, if you cannot obtain them, write direct to
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Ystradfydwg Urban District Council for exposing for sale meat which was unfit for human food.—Mr. Nicholas (of the firm of Messrs. W. H. Morgan, Bruce, and Co.) prosecuted.—Sanitary Inspector Hughes deposed that on the 23rd March last he visited defendant's shop, and there saw eleven pounds of meat exposed for sale. It was unfit for human food. Witness wanted to take possession of it, but defendant ordered him out of the shop, and offered to sell it to him. Subsequently he obtained possession of it, and found it was in an awful state. It was full of fungi.—The magistrate said the offence was a serious one, and fined the defendant £3 and costs.

JOHN HAWKINS, butcher, Pentyrch, was summoned for a similar offence.—Inspector Hughes said that on March 22 he saw a quantity of meat exposed for sale at the back of the shop and four pieces in the window in a putrid state. He took the meat away in a cart, and afterwards had it destroyed. The whole of the meat was full of fungi.—Mr. James Phillips, solicitor, who defended, called the daughter of the defendant, who said that she told the inspector the meat was not intended for sale. It was kept for the purpose of feeding dogs.—The defendant was fined £5 and costs.

ANN JOHN, butcher, Ystrad, appeared in answer to a summons issued against her for a similar offence.—Inspector Hughes gave evidence showing that when he visited the shop on March 24 he found a piece of mutton and five pieces of beef in a bad condition, and quite black. A fine of £3 and costs was imposed.

HARD LABOUR FOR BAD BEEF.

At the Clerkenwell Sessions on April 11, before Mr. Loveland-Loveland, Gottlieb David Link was indicted for having in his possession in October last, at his shop in Cowcross-street, Smithfield, four quarters of beef intended for the food of man, but unfit for such purpose.—Mr. Lush Wilson, Q.C., and Mr. Kershaw prosecuted for the Holborn District Board of Works; Mr. Geoghegan and Mr. Percival Hughes defended.—On two dates in October last Sanitary-inspector Billings saw the meat at the prisoner's premises, No. 91, Cowcross-street. It was seized and condemned as unsound and unfit for human consumption. Some considerable time elapsed before Link was summoned, but on coming before the magistrate, Mr. Bros, at Clerkenwell Police-court, he elected to go for trial.—The defence was that Link, according to the admission on the part of the prosecution, had never seen the meat condemned, and that he had taken every reasonable precaution by instructing his servants not to sell any meat until it had been inspected by the sanitary authorities.—The jury, after an absence of three-quarters of an hour, found the accused guilty.—He had previously been fined 20s. for a similar offence, and his lordship, regarding the case as a very serious matter, sentenced him to four months' hard labour.

TINNED MEAT POISONING CASES.

ANOTHER instance of the danger attending the consumption of tinned meats occurred at Weston-super-Mare on Good Friday, when seven persons were poisoned through consuming a tin of compressed beef, and which would have been attended with fatal results but for prompt resource to medical treatment. It appears that at the dairy and greengrocery establishment of Messrs. Noel and Downing, Locking-road, the inhabitants were desirous of partaking of a hurried meal at mid-day, and to this end a tin of compressed beef was obtained from a local grocer, and of this seven persons subsequently partook. Shortly afterwards the whole complained of feeling unwell, the

indisposition rapidly increased, accompanied with violent vomiting and internal pains. Dr. Davidson was sent for, and on his arrival he found the situation so serious that the services of Dr. Rosbrough were also summoned. In the case of Mr. Noel and Mr. Downing the poison appeared to have been completely assimilated, and both remained for some time in a precarious condition. The usual antidotes were administered, but it was not until the following evening that the patients were declared to be out of danger.

POISONING BY SARDINES.

ON Friday, at Londonderry, a city magistrate and his family and servants, after partaking of sardines, were suddenly stricken with illness showing symptoms of acute poisoning. Six persons had to be put under medical treatment, two doctors having to remain in constant attendance during the whole of the night. No death has occurred, but all the patients are prostrated.

THE SALE OF PRESERVED PEAS.

At Greenwich Police-court, Stephen Jobbins, of Montpelier-vale, Blackheath Village, appeared to an adjourned summons at the instance of the Lee District Board of Works for selling at 155, High-road, Lee, peas admixed with copper equal to 1·7 grains per lb.—Mr. Taylor said he found by a recent decision at the South London Sessions that he should have convicted the defendant, who said there was no intention to defraud.—Owen Williamson, of 160, High-road, Lee, and Emily and Sarah Marsh, of 191, High-road, Lee, were similarly summoned, the admixture in each case being equal to one grain of copper to a pound of peas.—Mr. Williamson said he sold the peas as he took them over from his predecessor.—Fines of 20s. and 6s. 6d. costs, were imposed in each case.

ANALYSTS AT VARIANCE.

At Brentford, on April 17, Mr. William Wheeler, chemist, Chiswick, appeared to an adjourned summons alleging that he had sold as "Lime Juice and Glycerine Hair Wash" a preparation which did not contain any glycerine.

Mr. G. W. Lay, who defended, reminded the Bench that when the case was before them on the previous occasion Mr. Beavan, the county analyst, certified that the preparation did not contain even a trace of glycerine. The defence disputed the accuracy of that certificate, and elected to appeal to Somerset House. He understood that a certificate from the analyst of Somerset House had now been received.

The Clerk to the Justices said it had been received, and that it stated that the preparation contained half a drachm to the eight-ounce bottle.

Mr. Lay: That is precisely what we proved on the last occasion.

Mr. Montagu Sharpe remarked that this was really a most extraordinary state of affairs, and it would be impossible for the Bench to adjudicate on the case with the conflicting evidence at present before it, and therefore adjourned the hearing for the attendance of the gentleman from Somerset House.

PADDINGTON VESTRY AND THE SALE OF FOOD AND DRUGS ACT.

THE Sanitary Committee have presented a report recommending the Vestry to endeavour to secure, when new legislation was promoted, the following

amendments, if they be not already included in the draft bill.—(a) The marking of all receptacles, trucks, etc., used for distributing food stuffs, with the name and address of the owner, with the provision of penalties for failure to so mark or for falsely marking. (b) A requirement that the labelling of mixtures shall be in letters of minimum size, either on a separate label to be attached to the package after making up, or printed on the wrapper in such a position that they shall be conspicuously visible when the package is made up. All mixtures sold under registered trade marks to have their composition disclosed and recorded at the time of registration, and entered on the certificate of registration, and all other mixtures to have the proportions of the ingredients set out on the label. Mixtures sold under registered trade marks to be sold in the manufacturers' packages only. (c) Where a sample has been referred to Somerset House by the Magistrate, the Government analyst and the public analyst to be liable to be called as witnesses for cross-examination, as to the methods of analysis and interpretations of results, at the adjourned hearing. (d) The sample to be divided on all occasions into four parts, one to be given to the vendor, one to the public analyst, and two to be retained by the local authority for future use, if required. (e) The retailer to notify the local authority within seven days of service of summons of his intention to rely on the warranty of the wholesale vendor. The invoice of the wholesale vendor, if established in the United Kingdom, to be deemed a warranty. In such case one of the reserve portions of the sample to be forwarded to the wholesale vendor, and a summons to be issued forthwith against him, returnable on the same day as the summons against the retailer. In the event of the retailer proving that he sold the sample in the same state that he received it from the wholesale vendor, the summons to be dismissed against the retailer and the wholesale vendor to bear the costs of the prosecution of the retailer as well as his own. On the other hand, should the summons against the wholesale vendor be dismissed, and the retailer be convicted, the latter to pay the costs of the proceedings against the former. No defence to stand with respect of a warranty on the part of any wholesale or retail vendor not established within the United Kingdom. (f) A minimum fine to be prescribed for the second offence, and imprisonment without the option of a fine, at the discretion of the magistrate, to be prescribed for third and subsequent offences. (g) All convictions, subsequent to the first, whether for the same form of adulteration or otherwise, to be advertised by the defendant in such papers and on so many occasions as the court may direct, at the expense of the defendant. The court to have the power to direct the local authority to insert the advertisements and to recover the expenses from the defendant.

General Laurie, who has been instrumental in getting this report drawn up, expressed himself as satisfied with it, and proposed that a copy of it be sent to the Government and to all the other Metropolitan Vestries and Local Boards.

The report and recommendation in it were approved, and General Laurie's proposal was agreed to.

A letter was read from the Vestry of Clerkenwell quoting a recent case of a fine of 6d. and 2s. costs, which was imposed upon an offender who was convicted for the fourth time, and stating that they had communicated with the Home Secretary and the Local Government Board, urging that some effective means may be adopted to prevent what is practically an encouragement of adulteration, and asking the support of this Vestry in the matter.

It was decided to send a copy of the Committee's report to the Camberwell Vestry.

The Sanitary Committee reported that William Todd Wright, of 386, Harrow-road, was on the 4th inst. fined 40s. and 12s. 6d. costs for selling as butter

a compound containing 50 per cent. of margarine. The defendant was in occupation for three days only prior to the purchase.

The last report was ordered to be entered upon the minutes.

FOOD AND MEDICINE VESSELS.

By E. H. S. BAILEY, Ph.D., Lawrence, Kansas.

A SUBJECT of vital interest, and one with which we are frequently confronted, is the question as to the best material to use for vessels in which food or medicine is prepared. It is essential that the material should not be too expensive, and at the same time it should not be attacked by the substances cooked, either to injure the flavour, introduce poisonous substances, or in any way injure the quality. While vessels of glass or fine porcelain can perhaps be used by the pharmacist, when working on a small scale, yet these are not suited to the large manufacturer nor for general purpose of cooking food. It is true that iron is very generally used in the kitchen and in the coarser manufacturing operations, but, on account of its weight, and since it is readily attacked by acids, there are many cases in which it cannot conveniently be used.

Next in order it would be natural to consider tin, copper, brass, German silver, nickel, galvanised iron, granite or marbleised iron ware, earthenware, and finally aluminium. Each of these materials has its advantages, but it is especially of the disadvantages that this article treats. Tin-plate, as we name the sheet of iron covered with a thin coating of tin, has the advantage of cheapness, and it does not tarnish readily. On account of the very general use of tin in making cans for preserving meats, fruits and vegetables, there has several times arisen considerable excitement over the statement that the material so preserved was liable to be poisoned by the tin. From experiments made by Professor Atfield, however, it seems that the amount of tin dissolved is very small; in fact he says that ten pounds of the fruit must be eaten before any serious symptoms will appear. In one-fourth pound of apricots there was found $\frac{7}{1000}$ of a grain of tin; in the same amount of pears $\frac{7}{1000}$ of a grain; in tomatoes $\frac{7}{1000}$; in peaches $\frac{7}{1000}$. Canned asparagus was found to contain more tin than any other vegetables. Another excellent authority in discussing this question says: "While millions and millions of pounds of canned goods are consumed every year, not a single well-authenticated case of poisoning by tin has been detected." The cause of the poisoning that is sometimes a result of eating what the English call "tinned goods" is not the tin, but is the carelessness of the workman who uses perhaps zinc chloride or tin chloride in the process of soldering the cans; or it may be due to the fact that the food was partially spoiled before being canned. In the case of partially decayed meats, the process of preserving would not destroy the dangerous ptomaines that are present in them.

Tin, however, with all its advantages, is readily worn off from the surface of the iron, and then the vessel rusts and is liable to communicate to the fluid heated in it the disagreeable taste of iron rust. This can easily be noted in the case of moderately acid syrup preserved in tin cans; these readily show the presence of a large amount of iron, and this is especially true if the fruit has been exposed to the air in the can for a few hours after being unsealed. Canned grape-juice, when treated with an astringent like strong tea, makes a very fair quality of ink!

Copper is very extensively used for cooking-utensils where large amounts of food must be handled daily. It has also been found extremely useful to the manufacturing pharmacist. To what extent should the metal be used, and under what conditions? Copper is often found in food, upon analysis, and in various parts of the bodies of man and other animals. It is generally admitted that

small portions of copper continuously taken into the system are liable to cause impaired digestion, colicky pains, and often emaciation, it is supposed to act especially on the functions of nutrition and assimilation. There are not wanting instances of this kind of slow poisoning. Absinthe drinkers in Paris, who often drink a liquor that contains as much as one-fourth of a grain of copper per litre, suffer from the effects of the copper. There was a case in which a partially-tinned and dirty copper vessel was used to cook rhubarb. Those who ate of the food thus cooked suffered from the effects of the copper that was dissolved, and one was fatally poisoned. There is little doubt that the oxalic and malic acids of the rhubarb acted on the badly-tinned copper. A similar vessel was used to cook food with much salt, and of those who afterwards ate the food, one died. A servant carelessly left some sour-kraut standing for some time in a copper vessel; there were two fatal cases among those who ate the food. Even water will dissolve copper, as may be gathered from a case that is noted in which 3·767 grams of copper per gallon were found in some water that had stood in a copper kitchen boiler.

It is a well-known fact that pickles, peas, beans, and other vegetables are often "greened" by the use of salts of copper; this can readily be done by cooking the slightly acid food in a copper vessel, or by putting a little blue vitriol into the kettle in which it is cooked. The author has examined an ordinary pickled cucumber and found it to contain $\frac{1}{10}$ of a grain of copper, equal to one-seventh of a grain of blue vitriol. A pound can of green peas has been found to contain not less than two and a-half grains of copper sulphate. It is not asserted that this amount would cause immediate symptoms of copper-poisoning, but if such goods were habitually eaten, they could not fail to produce gastric irritation.

If acid substances, vegetable juices, soups, or stews are left in contact with copper for any length of time, they are liable to become contaminated. A solution of this kind, on standing, shows on the surface where it comes in contact with the copper and with the air a greenish scum, due to the formation of copper carbonate, or perhaps verdigris. Dirty, greasy, or corroded copper vessels should therefore *never* be used, but bright, clean copper vessels can be used with impunity, if the liquids (which should not contain much free acid) are not left standing in them.

Cooking utensils of zinc are not in common use, but galvanised iron has often been used. The salts of zinc are not as poisonous as those of copper, but the salts of this metal have a tendency to paralyze the heart, and afterwards the circulatory system becomes affected. Of course acid liquids readily attack zinc; if the metal is even exposed to moist air it is soon oxidized and becomes covered with a white coat of "rust." This oxide is however soluble in salt water. It is an interesting fact that milk does not seem to sour so quickly if kept in zinc pans; this is no doubt due to the fact that the lactic acid, which is at first formed by the souring of the milk, is neutralised by the zinc oxide; this salt will be dissolved in the milk. Some experiments made by M. Schaufféle show the action of various liquids on zinc and on galvanised iron. One litre of each liquid was allowed to stand for some time in contact with the metals. The results were as follows:

Brandy in zinc dissolved ·76 gram; with galvanised iron, ·70 gram. Vinegar in zinc dissolved 31·75 grams; with galvanised iron, 60·75 grams. Fat soup in zinc dissolved ·46 gram; with galvanised iron, 1 gram. Milk in zinc dissolved 5·13 grams; with galvanised iron, 7 grams. Salt water in zinc dissolved 1·75 grams; with galvanised iron, ·40 gram. Wine in zinc dissolved 3·95 grams; with galvanised iron, 4·10 grams.

It is noticeable that in most case the galvanised iron is more readily attacked than the zinc.

Professor Wiley, of the Agricultural Department, has recently published the results of a series of experi-

ments on "Zinc in Evaporated Apples." These experiments were instituted on account of the fact that American evaporated apples had in some instances been condemned in foreign markets on account of the amount of zinc that they contained. In the process of drying, the sliced apples are first exposed to the fumes of burning sulphur and then dried on zinc or galvanised iron trays. As the results of these experiments, it was shown that the average amount of zinc in apples dried on galvanised iron trays was such that one pound of the apples would contain about two-thirds of a grain of zinc oxide. It was suggested that aluminium or well tinned iron wire be substituted for the galvanised iron in the drying trays.

It is seldom that leaden vessels are used in cooking, though they are used in the preparation of acids and chemicals. Tin-plate is however often adulterated with lead to such an extent that the presence of the dissolved lead can readily be detected, if acid fluids are boiled in the vessels. Glaze on pottery often consists of silicate of lead, and this is quite readily attacked by many food substances. The author in experimenting upon the action of various foods upon this glaze, allowed the different substances, such as vinegar, milk, soured apple sauce, etc., to stand for some days in the common earthenware pots which are extensively used in culinary operations in some parts of the country. On analysis it was found that lead in considerable quantities had been dissolved.

The symptoms of chronic lead-poisoning are perhaps more familiar than those of other poisons on account of the fact that so many artisans are liable to be affected in this way. In Paris alone the hospitals treat 700 cases of lead-poisoning annually. The form of the disease known as "lead colic" is perhaps the most familiar. "Marbleised iron" ware and "granite" ware has also come in for a share of criticism on account of the lead and arsenic that it is asserted is sometimes found in the glaze. W. H. Dougherty found that white wine vinegar on evaporation in a vessel of this kind yielded three grains of lead acetate; citric acid did the same. Another chemist has communicated to the British Society of Public Analysts his experiments with a white enameled ware. He found that it was readily attacked by acids, acid fruits, and common salt, and ascribes this to the *basic* character of the glaze. When such glazes are used (the ware of this kind is very useful and deservedly popular), arsenic and lead should be excluded from it, or if present they should be so combined that they are not readily acted upon by culinary substances. If they are not attacked by a one-per-cent. solution of citric acid they may be considered safe.

Without discussing the use of nickel, a metal that is coming into use in some localities, there is one other metal, namely aluminium, that deserves more than passing mention. Until within the last few years the high price of this metal has precluded its use except in a very limited way, but now since the metal can be bought at fifty cents per pound or less—on account of the ease of production with the electric furnace—there is no reason why it should not be very extensively used. In the first place it is not readily attacked by the ordinary liquids or solids in use in the kitchen; and even if it were slightly attacked, the salts of the metals would not be injurious compared with copper and lead. Again, it is light. Why handle a vessel of iron seven times as heavy as water when you can just as well use one that is only two and a half times as heavy as water? In the third place it is easy to keep clean and bright. An occasional rubbing with vinegar and sand (not soap and sand) will keep the ware in fine condition. Materials do not burn on to the bottom as readily as in other ware. Finally, dishes of aluminium will last for a long time with ordinary care; this has been demonstrated for stew-pans and kettles in the kitchen by years of hard service. Now that dishes of aluminium have become cheap, every one should encourage their general introduction into house-

hold economy, both on sanitary grounds and because of their convenience.—*Bulletin of Pharmacy.*

A FREE CRITICISM OF THE MARGARINE DEFENCE SOCIETY.

MR. JOHN WILLIAMS recently was surprised on reading a letter which had been sent to the Bolton Association, written by Mr. Henry B. Wilkinson: "A letter was received from Mr. Henry B. Wilkinson, the secretary of the Manchester Margarine Defence Society, in reply to a resolution which was passed, in respect of the margarine question, at their last meeting. He wrote thanking them sincerely for sending him a copy of the public-spirited resolution which they had passed. He said it was a pleasing contrast to the childish recommendation of the Manchester, Salford, and District Grocers' Association, asking that margarine should only be sold retail out of a specially-shaped box or tub." As no doubt those present would know, in the body of the report of the Select Committee it stated that it was expedient that margarine for the market should be packed in a prescribed box or receptacle, and while it was exposed for sale it should remain in such receptacle. Before him he had the pamphlets which Mr. Wilkinson was distributing throughout the country, and he regretted that such a gentleman as Mr. Wilkinson was lending himself and his services to foreign manufacturers, and libelling, so to speak, in another direction a section of the community, namely, the farmers. He (Mr. Wilkinson) posed as a friend of the grocer, describing the action of the Manchester Association as childish, which, if carried out by Parliament, would alleviate all the trouble such as that which had been recently noticeable at Bolton in respect of the various prosecutions. The Manchester Association and the bulk of other Associations had been endeavouring to insist for several years that margarine should be sent out by the manufacturer in some form or other that would describe itself to the public, and to those who were selling it, at once. If this was carried out, it would be as easy to the grocer to deal in margarine as, say, Epps' cocoa in packets or Colman's mustard in tins. The inspector knew very well with such articles as he had mentioned, providing no loose goods were sold, there was no probability of a prosecution. If a grocer kept loose mustard, then, of course, that was his own look out. He also believed that a counter could be made as artistic and neat with margarine packed as he suggested as with the present mode of dealing with it. Reverting to the Manchester Margarine Defence Society and the position of Mr. Wilkinson, he said, Who were this body of margarine manufacturers? Why, gentlemen of German and Dutch extraction, some of whom had acquired millions of money, and owned large estates in their native land, they having acquired this wealth through the freedom given them to put this artificial "butter" up in every shape and form to imitate real butter. Our laws allowed them to sell their products in England in any shape or form, but they were not satisfied with this, as they had the impertinence to offer to supply us with a Food Products Bill, made in Germany, or, at all events, if not made in Germany, they, at any rate, quoted with great satisfaction that the Germans did what the Margarine Defence Committee advised us to do, namely, to vote against the provision which would denote, without further labelling by the retailer, what the article really was. He submitted that it was nothing less than hypocritical cant on the part of these manufacturers of margarine to profess as they did that they had the interests of the poor at heart. The arguments which Mr. Wilkinson and the society used were not honest, and although the farmers of the

United Kingdom might not be all one could wish, yet he was not ashamed to say that his sympathy went more in the direction of the farmers of Ireland, who lost the sale of pure butter, rather than with the Dutch margarine manufacturers. In the pamphlets which had been issued by the Margarine Society, it stated that ninety-nine hundredths of English dairy farmers were dirty and insanitary to the last degree, and that margarine was recommended to those delicate persons who could not digest butter, which, it was stated, was apt to produce butyric dyspepsia. They also stated that since the price of bread had been raised so much an increase in the cost of the people's butter would be a great hardship, and that during the nine years the regulations affecting margarine had been in force, the public had learnt to distinguish the imitation butter from the real by the large label displayed upon the margarine exposed for sale. In attempting to uphold margarine, one of the pamphlets dealt with "A farmer's excuse," "Diseased cows in every parish," "Caution to consumers," "Scientific Evidence," "A £50 cow condemned." As an experienced grocer of long standing, he objected to such literature being published, as it was not honest, and also to the inference of Mr. Wilkinson with the retail grocers of this country. He contended that retailers knew how to conduct their trade without any interference on the part of manufacturers. He considered it a disgrace that the Margarine Society, through its secretary, Mr. Wilkinson, should distribute such matter, and that, on the plea of encouraging British industries, he should ask for financial support from the Dutch and Holland manufacturers. To say the least, it was most inconsistent. In the report, as the secretary of the society, Mr. Wilkinson stated that "the manufacturers of margarine resident in Holland may be surprised that in the three leaflets herewith I have laid particular emphasis on margarine made in Great Britain. The reason of this is that in addressing members of the English House of Commons I have appealed to their patriotic feelings and their duty to encourage British industry and the interests of British consumers." Further on he observed: "Several Dutch makers have sent me their contributions to the funds of the Manchester Margarine Defence Society for 1896-97, but there are far more firms in Holland who have never contributed to the Manchester Defence Society since it was formed in 1895. If these gentlemen think the work of this society is meritorious, and likely to protect their interests as manufacturers, I beg to ask them to strengthen our hands by their liberal financial contributions." Therefore, it was made as plain as a pike-staff that Mr. Wilkinson, as secretary of the society, was asking the English House of Commons to support British industry, while he was receiving the support to carry on the campaign from the Dutch and German manufacturers. It was quite true that farmers should amend their ways, and he was pleased to see at the Bolton meeting last week that the secretary said that the agricultural industry was certainly deserving of sympathy, but that the farmers should look to the landlords for redress, and not to the various tradespeople who were trying to get an honest living. If they, as retailers, worked more amicably with the farmers, and endeavoured to assist one another more, then, he thought, prosecutions such as those at Bolton would most likely cease. Indeed, if the farmers should see the pamphlets which had been distributed by the Margarine Defence Society, it was almost enough to bring about civil war between town and country—not to mention legislation in Parliament. (Hear, hear.) He said, along with Mr. Chamberlain, that there were some people who thought patriotism was extolled in other countries, but not in our own. The co-operators, speaking generally, were in favour of the Select Committee's recommendations, and he could see no reason why the retailers generally should not be so. (Applause.)

**To the Grocers, Provision Merchants, Pastry-
Cooks, Confectioners, and the Public
of the United Kingdom.**

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M A R G A R I N E .

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“It is of Pure and Excellent Quality.”

Monsieur ARNAUD, Chef to his Grace the Duke of Westminster, says :

“I hereby certify that ‘LE DANSK’ is equal to Butter for Pastry Making in the way of Taste and Lightness, and Superior to same in giving a Rich Colour. I can testify to the above, having made full experiment.

(Signed) S. ARNAUD.”

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BOVRIL is Beef, the entire lean of the Best Beef procurable. Not the Forty Pounds Weight of Beef which would have to be eaten before the nourishment contained in One Pound of Bovril could be imparted to the system, but Forty Pounds of the prime parts obtained from the finest selected cattle reared in Australia and South America, concentrated by a special process, rendering it the most perfect form of strengthening, stimulating, easily digestible nourishment in the smallest possible bulk.

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BOVRIL is not merely a Meat Extract containing only the stimulative without the nutritive constituents of Beef. With the ever increasing rush of Life, commercially and socially, there arose a demand for a stimulant without deleterious after-effects; hence the introduction of ordinary Meat Extracts, Meat Essences, &c. But stimulant without nourishment simply stirs up the Fire of Life without providing for its continuance, thereby exhausting the system; the result being precisely the same as if poker were solely depended on to FEED the household fires.

INVALID BOVRIL

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Food & Sanitation

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After eight months' investigation in the Public Health Laboratory of the University of Edinburgh to estimate the value, in prevention of disease, of the best known Carbon and Asbestos Filters, of the Pasteur Filter, and of a copy of it in another material, Dr. H. H. JOHNSTON, D. Sc., M.D., C.M., states:—“The Pasteur-Chamberland Filter is undoubtedly the best, and the only one in which reliance can be placed for permanently sterilizing drinking water.”

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Food and Sanitation.

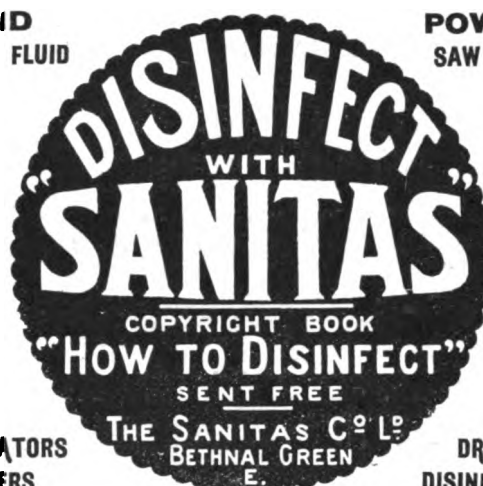
SATURDAY, MAY 1ST, 1897.

THE ILLUMINATING POWER OF BURNING OILS.

It is often stated by certain sections of the oil trade, says the *Chemical Trade Journal*, that American petroleum oil is "cleaner" than Scotch paraffins for illuminating purposes. It is not always easy to know exactly what is meant by this term, but it is generally coupled with the statement that American burning oil or kerosene gives a greater illuminating power.

FLUID
CRUDE FLUID
OIL

POWDER
SAW - DUST
SOAPS



FUMIGATORS
INHALERS

DRESSINGS
DISINFECTORS

KINGZETTS (Patent) SULPHUR FUMIGATING CANDLES.

In the face of this it will be interesting to record the facts revealed by a series of actual experiments. Space will not allow the publication of the tests of each oil, but by giving the average results of all the experiments, a reliable basis from which to draw comparisons will have been established. In the first place the figures given below are the average of a number of experiments on *all* makes of Scotch oil, while several samples are also represented by the average figures for American oils. The samples were purchased in the open market, and the tests made strictly comparative. The burners used were ordinary 1½-inch single wick, and were made by a well-known maker. New wicks of the very best quality, all cut from the same roll, were used for each test. Glass oil containers of identical shape and size, having a capacity of one quart, were employed. The lamps were carefully trimmed, then lighted and turned up full. The readings were taken after they had burned for half an hour, and again after five hours without the wick being in any way interfered with. The photometer used was a Bunsen-Lethaby. Only the horizontal rays were measured, and not those projected at various angles, as is the practice of Redwood. The method employed was thus exactly similar to that used by gas examiners. Redwood's method gives much higher results, and is somewhat misleading:—

| | | Average Results. | |
|------------------------------------|-----|------------------|-----------|
| | | Scotch. | American. |
| Illuminating power after ½ hour.— | | | |
| Stand. candles | ... | 12.93 | 9.64 |
| Illuminating power after 5 hours.— | | | |
| Stand. candles | ... | 10.61 | 7.52 |
| Illuminating power after mean.— | | | |
| Stand. candles | ... | 11.77 | 8.58 |
| Duration of test | ... | 5h. 11m. | 5h. 10m. |
| Oil consumed. Grains. | ... | 3.467 | 3.102 |
| " " per hour. Grains... | ... | 668.3 | 600.4 |
| " " per hour, per C.P. | ... | | |
| " Grains | ... | 57.0 | 69.9 |
| Diminution of illuminating power | | | |
| after 5 hours | ... | 17.94% | 21.84% |
| Specific gravity | ... | 802.0° | 797.7° |
| Flash point (Abel) | ... | 119.4°F. | 75.1°F. |
| Tint (Lovibond's tintometer) | ... | 1.29 | 1.25 |
| Comparative value of 1 gallon | ... | 6.0d. | 4.86d. |

These results are most instructive, and are conclusive as they are supported by the most reliable and declared testimony.

They show that the Scotch oils have the advantage in everything except colour, which is scarcely a factor in determining the value of a burning oil. In regard to safety, illuminating power, maintenance of illumination, and consumption per candle power of light emitted, the American oil is a bad second. An oil is

PURE, WHOLESOME, DELICIOUS.

BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House and
successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK!

burnt to obtain light, and it will be seen that the value calculated on the illuminating power shows a balance of 1½d. per gallon in favour of the Scotch oils, popular beliefs notwithstanding.

MILK AS AN AID IN THE CONVEYANCE OF DISEASE.

DR. R. G. FREEMAN (*Medical Record*, March 28, 1896) has collected and tabulated fifty-three epidemics of typhoid fever attributed to milk, twenty-six of scarlatina, eleven of diphtheria, two of foot-and-mouth disease, three of throat affection, two of acute poisoning, and one of cholera asiatica, all occurring since 1880, and including none of those tabulated by Hart in 1881. As an aid in the consideration of the manner in which milk may become infected, Dr. Freeman prepared three plates of equal size (three and a-half inches in diameter), and exposed them for the same length of time (two minutes), one in the open air, one inside a barn, and the third under a cow being milked in the same barn, the plate being held just in front of the milk-pail. Six colonies developed on the first, 111 on the second, and 1,800 on the third. Such a number of bacteria falling on so small a surface in so short a time indicates that an enormous number may fall into a milk-pail during the time required for a complete milking. These bacteria fall from the belly of the cow, from the clothes of the milker, and from his hands as well. Contamination may be by impure water used in washing the utensils or in cooling the milk, or, again, as an adulterant. Whatever bacteria are present in milk after the first handling have ample opportunity to multiply before the milk is consumed, since milk is usually over thirty-six hours old when it is delivered to the purchaser. Ordinary New York milk often contains from a hundred to several millions of bacteria in each drop. Dr. Freeman divides the diseases which it is believed may be conveyed by milk into three classes: 1. Those in which the pathogenic micro-organisms which are introduced into the milk are conveyed from the body of the cow, as tuberculosis, anthrax, foot-and-mouth disease, and acute enteritis. 2. Those in which the pathogenic micro-organisms are introduced from some other source during or after milking, as cholera, typhoid, scarlet fever, and diphtheria. 3. Those caused by milk containing poisonous agents developed by bacterial growth. The disease-germs emanating from the cow may be within the udder, or the contamination may occur during milking by the dropping of particles of fecal matter from the cow, or they may come from the dust of the barn containing dried particles of fecal matter or saliva of the cow. Epidemics due to milk have certain characteristics. The cases appear suddenly, many new cases each day, and the subsidence is equally marked a few days after stopping the harm-

ful milk supply. The houses invaded are often widely distributed and not restricted to some particular part of the town. The houses of the rich are apt to be more seriously invaded than those of the poor, because the poor, as a rule, use little milk. The houses invaded often have the best hygienic surroundings. The special milk-drinkers in each family are most liable to become affected. In more than half of the epidemics, cases of the diseases have occurred among the handlers of the milk prior to the outbreak. A study of the reported epidemics teaches that in cases of communicable infectious diseases inquiry should be made into the source of the milk-supply; milk-traffic should be separated from houses where people live; the dairy should be at least one hundred feet away from the house, barn, or privy, and on a higher level, and should have a pure water supply of its own; nobody should be allowed to enter the barn or dairy or handle the milk who has come in contact with a sick person, the sickness not being positively known to be non-contagious; all persons connected with the milk-traffic should be required to notify the authorities on the outbreak of any disease in their respective abodes, and to abstain from their work until permission to resume is given by the authorities notified; cities should accept milk only from dairies regularly inspected, and where all the cows have been proved by the tuberculin-test to be free from tuberculosis; all tuberculosis cows should be killed, and the premises where they have been kept should be thoroughly disinfected; milk should not be kept for sale or stored in any room used for sleeping or domestic purposes or opening into the same.

A CURIOUS COFFEE CASE.

AT Dumbarton on April 23, at the instance of Mr. Dunbar, sanitary inspector, James Glen, grocer, Mitchell-street, Alexandria, was fined 21s. and 21s. expenses, for having in his shop, by the hands of his daughter, sold to complainer ½lb. of coffee containing 30 per cent. of chicory. In the evidence it was stated that accused sold the coffee as pure coffee, trusting on the genuineness of the coffee sent to him by the wholesale merchants from whom he ordered pure coffee. An invoice was also produced from the wholesale merchants referring to "7 lbs. pure coffee." The Sheriff said he quite believed accused was selling an article he considered pure. Peter Weir, grocer, Gray-street, Alexandria, pleaded not guilty to having, through his assistant, sold ½lb. of coffee which contained 15 per cent. chicory. Accused, through Mr. M'Farlan, writer, Dumbarton, his agent, pleaded warranty. In the evidence it was stated that accused made it a study to have "pure coffee" marked on the invoice, and this was upon the invoice for the coffee complained of. The wholesale merchant's representative deposed that it was unadulterated coffee they sent to accused. Sheriff Gebbie said nobody could explain how the chicory got into the coffee. He dismissed the complaint.

COFFEE.

AT Marylebone on April 22, Mr. J. Belsham, of High-road, Kilburn, was summoned by Sanitary Inspector Edmonds, for selling coffee adulterated with 50 per cent. of chicory.—Mr. A. P. Johnson supported the summons.—Defendant pleaded guilty, and said his assistant made the mistake.—Mr. Curtis Bennett fined defendant £2 and £1 13s. 6d. costs.

SUGAR.

AT Worship-street, on April 21, Edith Eve, 53, New North-road, for selling as Demerara sugar a crystal sugar dyed, fined 7s. 6d. and 12s. 6d. costs;

Samuel Moore, 108, East-road, Hoxton, also for sugar, fined 7d. 6d. and 12s. 6d. costs; Frederick Bottany, 35, Farston-street, Shorditch, for sugar—crystal sold as Demerara—7s. 6d. and 12. 6d. costs.

MEAT.

At Clerkenwell, on April 23, Patrick Reid, butcher, of Craiglea, Auchter-Elbow Elbow, Aberdeenshire, was summoned by the Holborn District Board of Works for depositing at 93, Cowcross-street, St. Sepulchre, on March 19, two sides of beef which were unsound and unfit for the food of man.—The defendant pleaded guilty, and Mr. H. Smith imposed a fine of £20.

BUTTER.

At the Shire Hall, Nottingham, on April 24, George Windle Collyer, farmer, The Elms, Daybrook, Arnold, was summoned at the instance of Colonel W. F. Story, Inspector of Weights and Measures, for selling adulterated butter on March 25, at Arnold; and Samuel Dove, grocer, of Arnold, was summoned for a like offence on March 4.—Mr. W. E. Bottrill appeared to prosecute, and Mr. W. Clifton defended Collyer, the case against whom was first heard.—In opening the case for the prosecution, Mr. Bottrill said Collyer was a farmer supplying various shopkeepers, amongst others being Dove. On March 4 Colonel Story went to Dove's shop and obtained a sample of butter, and the result of that was that the Colonel again visited the shop on a day he knew Collyer would be there delivering butter, and got a sample from him, informing him that the object was to have it analysed. The result of the analysis was that the butter was manifestly adulterated with margarine, the sample containing 80 parts of butter and 20 of margarine. He would ask the magistrates to make an example of this case, because the amount of mischief that was done to retail shopkeepers by adulteration on the part of the makers of the article was enormous.—Colonel Storey gave evidence which bore out what the solicitor for the prosecution had stated, and Mr. Clifton then addressed the Court for the defence. He remarked that his client was a farmer residing at Red Hill, Arnold, and also had a holding at Woodborough some four or five miles away. The defendant could not possibly have known that the butter was adulterated. He had in his service at the Woodborough farm a baliff named Stevenson, and it was the duty of his wife to make the butter. Owing to the unsatisfactory conduct of Stevenson he was given notice to quit on February 22, and after that date Mr. Collyer received numerous complaints as to the quality of his butter.—Mr. Heymann: But if he sells it he is responsible.—Mr. Clifton: I admit he is legally responsible, but not morally responsible.—The defendant Collyer was then sworn, and, examined by Mr. Clifton, said he believed his late baliff had maliciously adulterated his butter. Previous to his dismissal, he had not received any complaints as to its quality, but after that circumstance they were numerous.—The defendant Dove also gave evidence, from which it appeared that he had had butter with satisfactory result from Collyer for about two years. The week that Colonel Story visited the shop, however, he received several complaints, and his trade had very materially suffered in consequence.—Several other witnesses were examined by Mr. Clifton with a view to showing that Collyer's butter had given satisfaction until after February 22, which date corresponded with that of the dismissal of the Stevensons.—After a brief consultation, the magistrates imposed a fine of £10.—In respect of the proceedings against Dove, Mr. Bottrill said, with the permission of the Bench, he desired to withdraw the summons. His trade had been very much damaged in

consequence of the quality of the butter supplied to him, and in the course of one week he had sold as much as 25lb. less than formerly.—Colonel Story, in the course of his evidence, exonerated Dove from all blame, and corroborated what had been said about the unfortunate falling off in his trade.—Mr. Clifton, on behalf of Collyer, said he was very desirous that Dove should not in any way suffer, as he was not at all to blame.—The Magistrates concurred with the request of Mr. Bottrill, and the summons was dismissed.

At Lowestoff, on April 20, Henry Hulme, Carlton Colville, grocer, was summoned for selling adulterated butter on March 24. Superintendent Shipp said he visited the defendant's shop and said, "I want a piece of butter." There was a small piece of butter on a dish, and the figures 10 marked upon it. Defendant's wife said they sold that for cooking purposes. She further said that "she didn't like it and would not have any more of it." Defendant came into the shop, and in the presence of both witness divided the butter into three parts. The piece weighed $\frac{1}{2}$ lb., and witness gave defendant 7½d. for it. Witness also purchased some more butter and lard; these were returned by the analysts as correct. The $\frac{1}{2}$ lb. of butter contained 50 per cent. of fat other than butter fat. Defendant said he was sorry. He bought the butter as a mixture and sold it as such. The magistrate said defendant was liable to a penalty of £20. They would only inflict a fine of £2 10s., or 14 days.

GLYCERINE.

At Rugeley on April 26, Robert Myatt, grocer, of Queen-street, was charged with selling adulterated glycerine.—Mr. Van Tromp, Inspector under the Food and Drugs Act, prosecuted, and stated that this was the first case of the kind in South Staffordshire.—It appeared that two of his assistants purchased a dozen penny bottles of glycerine from the defendant. They were found to contain 45 per cent. of glucose syrup.—Mr. Armishaw, for the defence, stated that defendant had sold the glycerine just as he had received it from Mr. Tingle of Lichfield, and that the invoice for the same constituted a warranty.—It was stated on behalf of Mr. Tingle that he had purchased the glycerine from another firm.—The Bench inflicted a fine of 1s. and 30s. costs.

POISONED BY TINNED FOOD AT BRIMINGTON.

CHARLES ROWE, 19 years of age, who was poisoned by eating tinned meat, and has lain in a precarious condition during the past few days, is gradually recovering from the effects of the poison.

SPIRITS.

ROBERT SKELTON, innkeeper, Allerston, appeared on an adjourned summons for having sold adulterated gin on February 27 of this year. This case had been adjourned in order that a receipt which defendant denied having given for 2s. might be produced if possible. The 2s. was paid by the purchaser of the gin. It was also then stated that the gin sold by the defendant contained 7 per cent. of additional water.—The receipt was now produced, and after examining it the defendant admitted that it was one signed by himself, and Mr. G. E. Royle, who represented the defendant, said that under the circumstances he could do nothing more than leave the case in the hands of their worships.—The Magistrates decided to inflict a fine of £1 and costs, the Chairman stating that he did not know what the defendant could have been thinking of to swear that he never gave a receipt. He (the Chairman) had no doubt the defendant would hear more about the matter.

At Mansfield, Arthur Whitworth, landlord of the Royal Forester, Union-street, Sutton-in-Ashfield, was summoned at the instance of Colonel Story for selling adulterated whisky on April 1. Mr. J. D. Fidler appeared for the defendant. Inspector Story deposed to purchasing a sample of whisky from the defendant, and the analyst's report of the case stated that it contained six parts of added water in excess of the quantity allowed by law. Mr. Fidler contended that the weakness was due to evaporation. Fined 21s. and costs.

MARGARINE.

At the Marylebone Police-court, on April 22, Mr. James Farley, 1, Fleet-road, was summoned by Reginald Geary, Inspector under the Sale of Food and Drugs Act, for selling margarine without wrapping it in a wrapper notifying the public to that effect.—Defendant pleaded guilty.—Mr. A. P. Johnson, who appeared on behalf of the Vestry, said the article in question was purchased for butter, but the certificate from the public analyst stated that it contained 95 per cent. of margarine. The defendant had previously been fined at the same court for selling adulterated coffee.—The report of the public analyst, Professor Stokes, on the sample submitted to him, and taken from the defendant's shop, was proved and handed in by Reginald Geary, Sanitary Inspector to the Hampstead Vestry. This certified that the supposed butter contained 95 per cent. of margarine.—Mr. Curtis Bennett said it was a very bad case as there appeared to be very little butter in the mixture. He should fine the defendant £5 and £1 13s. 6d. costs.

At Consett, on April 19, Annie Willey, grocer, of Victoria-street, Consett, was proceeded against for a breach of the Margarine Act by not having the margarine in the shop properly labelled.—Inspector Laidlaw deposed that on March 17 he visited the defendant's shop, and noticed three stands of butter all set in a row. He questioned the assistant about the same, and was told the prices. One of the stands contained margarine, and was marked 1s. per lb. He purchased half-a-pound of the margarine and divided it into three parts. He discovered that the margarine was not properly labelled, and when he received the margarine it was not wrapped up in a proper wrapper with the word "Margarine" printed on the same, according to the Act. The defendant came into the shop, and he called her attention to the fact that she had not the margarine labelled. Defendant then looked behind the stand, and said the label had dropped down. This was the state of affairs at this shop the week before. It was simply a case of negligence.—Defendant admitted the offence, and was fined 1s. and costs.

OLIVE OIL.

At Skipton, on April 17, Andrew Bradley, shop manager for the Silsden Co-operative Society, was summoned, on the information of Inspector A. Randerson, for a breach of the Food and Drugs Act.

The inspector deposed that the defendant was manager of the Co-operative Society Stores at Silsden. On the 13th ult. he visited the shop and purchased 10 ounces of olive oil, for which he paid 10d. He divided the sample into three parts, but the defendant refused to have one of them. The label on the bottle from which the sample was taken said: "Pure olive oil." The certificate of Mr. Allen, the county analyst, showed the sample to contain the following parts:—Real olive oil, 75 per cent.; cotton and sesame oils, 25 per cent. The market price of pure olive oil was 7s. 6d.; cottonseed oil, 3s. 6d.; and sesame oil, 4s. 6d. per gallon. The sample he bought was sold at the rate of 3s. 4d. per gallon.

Richard Holdsworth, the secretary of the Co-

operative Society, having obtained permission to speak, said he happened to be passing through the stores at the time of the inspector's visit. The sample he offered them was refused because they had another sample he gave them some time ago. The label on the bottle said that it was olive oil, perfumed for the hair, and not pure olive oil. They did not know they were committing an offence, and the oil was just as they received it from the Wholesale Co-operative Stores at Manchester. They sold it at 1d. per ounce. They had not a guarantee with it except the words "pure olive oil" in the invoice.

Col. Robinson: You ought to be grateful to Inspector Randerson for finding out the mistake.

Mr. Holsworth: We are very grateful, because we believe in everything we sell being pure. We thought this was pure until we received the summons.

The Chairman pointed out that the defendant Society had their remedy against the wholesale dealers. They should always insist on a guarantee being given with their goods. A fine of 5s. and costs—£1 5s. 10d.—was imposed.

SALICYLIC ACID IN LIME JUICE.

At Liverpool, on April 21, John Henderson, shop-keeper, 220, Stanley-road, was summoned for selling lime juice cordial which was alleged not to have been of the quality and substance demanded by the buyer. The defendant was represented by Mr. Rudd. Inspector Vick went the shop on March 25 and asked for a bottle of lime juice cordial, with which he was supplied. A portion of its contents was afterwards submitted to the public analyst, who certified that it contained 100 grains of salicylic acid per gallon, a quantity which rendered the sample unwholesome. The acid was used in small quantities as an antiseptic. Mr. Rudd pointed out that the defendant had not manufactured the juice, but was only a buyer of it from another person. As a matter of fact the acid was more expensive than the juice, so that it was unlikely that the manufacturer would put more of the acid in than was absolutely necessary. On the legal view of the case he urged that the proceedings were invalid on the ground that the summons was in the name of Inspector Baker, whereas the complainant should have been Mr. Vick, who was the purchaser. Mr. Kinghorn said the point was immaterial. The manufacturer in this case had put some antiseptic in for the purpose of preserving the cordial, and to make sure of preserving it he had put in more antiseptic than cordial. Medical men agreed that after 26½ per cent. of antiseptic had been added, the article, when used as food, became injurious. A fine of 5s. and costs was imposed.

GAS LIME.

At North London, on April 26, the Hackney Vestry (for whom Mr. Eldridge was counsel) summoned the owners of four barges for conveying gas lime in uncovered barges during prohibited hours along the River Lea.—Mr. Leo Taylor, public analyst for Hackney, Mr. Otto Hehner, and other analysts gave evidence as to the noxious character of the gas lime; while Mr. Hughes, counsel for the defence, called evidence to show that the gas lime was not so offensive as described.—Mr. Corble, clerk to the Lea Conservancy, said that people sought the locality of the gas lime for the cure of their children suffering from whooping cough.—Mr. D'Eyncourt said that since the adjournment he had selected a day when he had not a cold in his head to go down and see and smell for himself. He saw the gas lime fresh from the purifiers, and other gas lime that had been out a week or two. He saw nothing particularly offensive in the odour; and, after the evidence given, thought he was justified in dismissing the summonses, with £4 4s. costs in each case.

SIR WALTER FOSTER'S MEDAL.

THE Council of the British Medical Association have awarded their gold medal for distinguished services to Sir Walter Foster, M.P.—This distinction is one of the most prized in the profession of medicine, and is only given for very exceptional service. It has been awarded altogether seven times—twice for distinguished gallantry in the field of battle by army surgeons; twice to civil practitioners for courage exhibited in rescuing coal miners after explosions: once to the late Dr. Parke for his devoted services with Mr. Stanley's expedition in Africa; and twice for public services to the profession—in 1880, to the late Dr. W. Farr on perfecting the system of vital statistics in this country, and in 1886 to the late Dr. Edward Waters for his efforts in the cause of medical reform. Sir Walter Foster has won the distinction by his services to the profession in Parliament, and (as a member of the late Administration) at the Local Government Board. The hon. gentleman's energy in coping with the cholera invasion of 1892 and 1894, and his assiduity as a member of the General Medical Council for ten years, completing his claim to the distinction.

ADULTERATION IN THE EAST RIDING OF YORKSHIRE.

At a recent meeting of the General Purposes Committee, Mr. Alderman Burton, in moving the confirmation of the committee's report, referred to the report of the analyst, from which it appeared that there had again been a case of adulterated whiskey. He hoped they would succeed in finding something else besides whiskey that was adulterated.

Lord Herries also commented on the number of samples of spirits which had been taken, and which were actually over two-thirds of the whole. There were other articles that might be submitted, such as butter and milk. He was told also that flour was frequently mixed with maize flour. (Hear, hear).

Mr. Appleton said the inspectors had been asked to take samples of other articles, but they seemed to be incorrigible. There was plenty of adulteration in the Riding, but the inspectors had not the brains to detect it. (Laughter.)

Mr. Alderman Burton said there could be no shadow of doubt that the Act had been carried out badly, but the committee would see that it was carried out in a better way in the future. There were many people who ought to have samples taken from them that were never visited at all. Orders had, however, now been given to the inspectors which the committee would expect to have been carried out before the inspectors presented their next report.

FOREIGN V. ENGLISH MEAT.

At the last meeting of the Hereford Board of Guardians the Chairman said that Mr. King (the master) had prepared some Irish stew for the Board to taste and judge between Australian and English meat. He would not tell the Board which was English meat and which was foreign until the members of the Board had tasted the stew.

The Rev. A. J. Capel said he did not think foreign meat had been used since the new dietary. The Board wanted to know by whose authority it had been used lately.

The Chairman: It was put on the list and passed by the Board.

The stew was then brought in by the master (Mr. C. King). It was served by Mr. Meats, and several of the Guardians partook of it.

The Chairman: If you have all finished luncheon, I should like the opinion of the Board (laughter). One dish of stew is numbered 1, and the other is numbered 2. The numbers are under the dishes.

Voting then took place, with the result that nine members voted for number 1 dish, and seven for number 2.

The Master stated that the number 1 dish of stew had been made with English meat.

The Chairman remarked that there was very little difference between the two. The difference in prices, however, was very considerable, the English meat costing 7½d. per lb., and the tinned meat 3½d., a difference of 4d. per lb.

CURIOSITIES OF FOOD.

Turks shudder at the thought of eating oysters (says E. Bainbridge).

The Digger-Indians of the Pacific Slope rejoiced in the great locust swarms of 1875 as a dispensation of the great Spirit, and laid in a store of dried locust powder, sufficient to last for several years.

The French will eat frogs, snails, the diseased livers of geese, but draw the line at alligators. At the present time the flesh of horses is much in vogue.

Buckland declares that the taste of boa constrictor is good, being much like that of veal.

Quaso, the fermented cabbage-water of the Russians, is their popular tipple, which in taste is described as a mixture of stale fish and soap-suds; yet, next to beer, it has more votaries than any other beverage. A tallow candle washed down with a draught of quaso forms a meal that it would be hard to be thankful for.

In Canton and other Chinese cities rats are sold at the rate of two dollars per dozen, and the hind quarters of dogs are hung up in butchers' shops alongside of mutton and lamb, but command a higher price. The edible bird's nest, probably made from species of *Ulva-marina*, or *porphyra*, of the Chinese is worth twice its weight in silver, the finest variety selling for as much as 30 dollars per pound.

The octopus, or devil-fish, when boiled and then roasted, is eaten in Corsica, and esteemed as a delicacy.

In the Pacific Islands and West Indies, lizards' eggs are eaten and enjoyed; the natives of the Antilles eat alligators' eggs, and the eggs of the turtle are popular everywhere, though up to the commencement of the last century the turtle itself was eaten only by the poor of Jamaica.

The Cingalese eat the bees after robbing them of their honey.

Ants are eaten by various nations. In Brazil they are served with a resinous sauce, and in Africa they are stewed with fat or butter. The East Indies catch them in pits, and carefully wash them in handfuls like we wash raisins. In Siam a curry of ants' eggs forms a costly and dainty luxury.

Caterpillars and spiders are much esteemed by the African bushmen.

After having wound the silk from the cocoon, the Chinese eat the chrysalis of the silkworm.

Spiders are roasted and form a kind of desert with the new Caledonians.

The Siberian people, called Tchuktchi's, toast each other by drinking seal oil.

The Guachos, or mounted shepherds, are in the habit of hunting skunks for the sake of their flesh.

C. Dickens remarks that at the public table in Boston, U.S.A., at every dinner, an unusual amount of poultry is to be seen on the table, and at every supper at least two mighty bowls of stewed oysters, in any one of which a half-grown Duke of Clarence might be easily smothered. These Yankees have a great variety of beverages with peculiar names, as gin sling, cocktail, sangara, mint julep, sherry cobbler, timber doodle, etc.

DANGER IN THE TEAPOT.

THAT there is danger in the teapot, says *The Ironmonger*, has often been preached by the advocates of the wine cup. Judging from the strong language used to our Sheffield representative a few days ago by a manufacturer of hollow-ware, the public are in dire peril from one of the most insidious diseases known to medical science—lead poisoning. Some makers of metal teapots of the cheaper kinds are in the habit, it appears, of disguising the thinness of the metal of which the articles are composed and making amends for its absence of weight by fixing lead underneath the rim in such a position that it cannot be detected until it comes into the hands of a skilled metalsmith. The bottom of the spout is another favoured place for the lead deposit. There is a third spot where lead is frequently used in great quantities—underneath the teapot—but in this instance there is not much danger to the public, and beyond imparting a fictitious weight to the article there is not much harm done. Lead is not used to any appreciable extent except in the cheaper kinds of goods, but in some cases it is present in alarming quantities. The manufacturer alluded to assures us that his workmen have removed from the interior of a cheap teapot as much as a quarter of a pound of lead, and this, be it remembered, not the bright-looking metal of commerce, but a lead corroded and blackened by contact with acid-impregnated water. Its presence outside the teapot may readily be detected, as after a time the lead becomes blackened, and while in this state the only remedy is re-plating, as no plate-powder can impart a polish. The use of teapots containing lead is highly dangerous in places where the water-supply is contaminated with vegetable acids. Sheffield suffered greatly some years ago from lead-poisoning, the water on the moorlands, from whence her supply is derived, having become adulterated with acid from the peat. The acid was so strong that in a few hours it was able to eat away an appreciable quantity of lead from the service-pipes, and it was not long before hundreds of people became affected with most alarming symptoms, which developed in some instances to drop-wrist and paralysis. There is no reason why lead should be present in the teapot, and it would be well for the health authorities in certain large towns where the evil exists to inspect and report upon the practice. Very few makers of hollow-ware resort to lead in finishing their wares for the market; only where very thin ware is manufactured is the questionable trick resorted to. Our informant states: "This lead is put into the teapot merely to give a false weight to the article, which in itself is as thin as tissue-paper." He spoke very strongly on the subject, arguing that such articles were apt to damage the reputation of an otherwise well-ordered community. He called one of his workmen, who stated in our representative's presence that he removed six ounces of lead from the interior of a cheap teapot a few days ago. The lead, he continued, showed signs that it had been eaten away by acid, and he contended with some heat that the manufacture of such articles should be prohibited. That the evil is a growing one is instanced by the largely increased numbers of such wares that are being sent into the manufactory for the purpose of repair.

A NEW INDUSTRY.

A SMALL experimental factory will shortly be opened in Melksham for the manufacture of one of the constituents of a new food which it is believed will prove of eminent use to the medical profession in dealing with diabetic and obese subjects. The basis of this new food is prepared from separated milk which can be obtained in quantities from the surrounding district. We understand that Mr. Fuller is much interested in the matter, and has secured premises in Melksham to proceed with the manufacture at once. The final stages in the process take place in the London laboratory.

EXPECTORATION AND TUBERCULOSIS.

DR. PAUL GIBIER says:—"If this habit of expectoration in public could be stopped, I am sure that in time tuberculosis would die out altogether. This seems a very sweeping statement, but it is not an ill-considered one. There is no question that the spread of tuberculosis is due largely to the habit of spitting. A great many people have tuberculosis without being aware of the fact. They do not know of the danger that comes from ejecting their sputum where it becomes dry and pulverised, and then flies about in minute particles to be inhaled by healthy persons, who are thus inoculated with the disease. This random public expectoration is a crime."

A NEW LIQUOR.

THE mysteries of taste are proverbially inexplicable. The *British Medical Journal* calls attention to "a nauseous intoxicant" which has found favour with the lower deep of inebriate Edinburgh. It is a combination of methylated spirit and paraffin oil. Some proportion of newly distilled whisky kept in bond fails to mature, and undergoes decomposition. It has then no attraction for the ordinary spirit drinker, and is therefore sold for use in furniture polishing and other devices of art. It was found, however, that the methylated spirit was consumed by some hardy inebriates of the poorer class, and to make it unpalatable the authorities added naphtha or paraffin oil. Even this precaution is not wholly successful, and the result is that groups of men and women are to be seen in certain parts of the Modern Athens more or less hopelessly intoxicated with "dynamite," as the disgusting brew has, not inappropriately, been nicknamed. The evil effects that "dynamite" must have on the nervous system need no demonstration. The famous Irish description of "a torchlight procession down the human throat" would fairly apply to this latest method of inebriety. The *British Medical Journal* suggests that it might be suppressed in the same way as ether drinking in Tyrone, and for the same reason—that it is a fraud on the revenue. It is perhaps not the highest motive for dealing with intemperance, but in this case it may serve.—*Manchester Guardian*.

THE "DAILY CHRONICLE" ON STREET DRINKS.

AN analyst informs us, says our contemporary, that he has been lately directing his attention to the hot drinks sold by itinerant Italians at street corners to passing children. They are nice red drinks, and they are cheap; and there is a great sale. The vendors apparently have an objection to see their drinks put into a bottle, and our friend the analyst had great difficulty in securing a sample. He got one, however, which contained fusel oil, sulphuric acid, acetate of potash, and bichromate of potash—a pleasant mixture, truly, and duly calculated to poison more or less the child who indulges in a pennyworth or two. The red colour, we are assured, is an aniline product, for which, among other things, arsenic is used. The vendors of ice-creams have been already visited by the public analysts, and much mischief has been brought to light. We would suggest that a little vigilance might well be devoted to the drinks sold from barrows. No one would wish to stop or hamper genuine trade, however humble, but if the vendors knew they were watched they would take care not to poison their customers—and that, after all, is only reasonable.

OYSTERS AND TYPHOID.

AT the instance of Dr. Wynter Blythe, Medical Officer of Health for Marylebone, Mr. J. Lunt, B.Sc., F.C.S., of the British Institute of Preventive Medicine, bacteriologically tested some English oysters of the kind eaten by a Marylebone resident, who subsequently

developed typhoid fever. The result was the discovery that the oysters were undoubtedly contaminated with sewage, and therefore liable to specific typhoid infection, although such specific infection was not detected in the specimens examined. Commenting upon this, Dr. Blyth, in his monthly report issued last month, says: "Any article of food eaten uncooked, contaminated with sewage matter, is dangerous to health, and should not be allowed to be sold. How this is to be effected is a difficult problem in the case of such articles as oysters. The only method known is bacteriological cultivation, which takes many days; and it has been shown that the results are uncertain, for oysters collected from beds on which sewage flows do not always give the marked results that these oysters yielded. In other words, oysters may be contaminated with sewage and the sewage not detected. This case has been communicated to the Local Government Board, so that they may, if they think fit, investigate the origin of the sewage and communicate with the local authority in whose district the sewage oyster-bed exists."

THE SANITATION OF YARMOUTH.

ALTHOUGH the Corporation of Yarmouth has won a verdict on the particular issue raised in the case, similar to that concerning the death of Mr. T. H. Smith, tried at Birmingham Assizes last summer, the result of the case, says the *Birmingham Mail*, will be to stir up lethargic corporations and sanitary authorities, and to insure a stricter protection of the public health from the contamination of sewers than has hitherto been afforded in many localities. For, as Sir Henry Hawkins, who heard the case, pointed out, the question was whether or not the Yarmouth Corporation had laid its sewers properly, or had done the work so negligently that sewage escaped into the well which gave Mr. Durrant typhoid fever and killed him. A shocking state of affairs was revealed in the case, for the public analyst of the town declared that no less than 300 wells he had examined were unwholesome. If these disease spots remain the reputation of Yarmouth as a "health" resort will probably undergo some diminution. In the present instance the Corporation was fortunate in proving that the well was on a higher level than the sewer, and the jury, remembering *Æsop's* fable, would not believe that sewage ran uphill. But Yarmouth, it is to be hoped, will take some notice of the warning.

WHISKEY AND THE FOOD AND DRUGS ACT.

A MOVEMENT is on foot to ask for a clause to be inserted in the Food and Drugs Act now under consideration of Parliament, which will prevent the sale of whiskey under two years old as an article of food. This is carrying faddism to a stupid excess. We have recently seen a process which cleans and purifies new whiskey so perfectly that, after six months in a sherry cask, the whiskey is equal in every respect to a seven years old whiskey. Why should a blender be condemned to a loss of a certain percentage of his spirit per year by evaporation in bond and why should the Government be kept out of the duty on spirits for years if knowledge can make new whiskey in one year or less as wholesome as a seven years old whiskey? We should remember how costly our present system is, and reduce it where possible.

NUCOLINE.

PROFESSOR JAYO says:—

"I find nucoline to be a pure, vegetable, fatty pro-

duct obtained from sound, sweet nuts. The fat is white in colour and neutral in flavour; the boiling point is high, and at the highest temperature nucoline evolves comparatively little smell or fumes. These properties render nucoline specially suitable for frying purposes.

"A trace only of free fatty acid was found, showing this substance to be perfectly free from rancidity, and also possessed of good keeping qualities.

"In the technical department of my laboratory I caused nucoline to be tested against butter of the very best quality in cakes and other goods. I found that to the same quantity of flour the following proportions of fat were approximately equivalent to each other: 6 lbs. of butter, or 5 lbs. of butter and 'nucoline' in equal proportions, or 4 lbs. of nucoline.

"I have no hesitation in recommending nucoline to confectioners and the general public; first, on the ground of purity and wholesomeness, and secondly, on the ground of economy, not only because of the lowness of price, but also because it goes much further as a result of being a pure fat."

MILK—AND HOW TO SELL IT.

MR. ALEXANDER LEITCH is well known as one of the most strenuous advocates of pure milk in the United Kingdom, and a lecture he delivered at Glasgow recently contains suggestions which readers will find of value and worthy of adoption in other towns.

Mr. Leitch: Mr. Chairman, ladies and gentlemen, I am here to-night at the request of your president to give you a lecture on how to sell milk, but I think there are men here who could have taken up this lecture better than I. Still, from what I say during the course of my remarks some good may be derived both by the trade we represent and the public generally.

There are many important questions, and questions of special interest to those engaged in selling milk to the public. Some of these arise out of the perishable nature of the milk itself, others arise out of peculiar conceptions or misconceptions in regard to milk as compared with many other products of nature or of manufacture, and, following upon these, quite a number arise out of regulations by Acts of Parliament, by the action of Health Committees, and by the demands of portions of the public, which place all honest men in the milk trade in a most invidious position, in many instances, as compared with those engaged in almost all the other industries of the world.

Now, I propose to draw your attention for a little to several of these points:—

- 1st, Considerations arising out of supply and demand.
- 2nd, How to avoid waste of milk and loss of money.
- 3rd, Considerations connected with legislation, and regulation to which the dairy trade is or may be subjected.

I may state, however, at the outset, that the problem of the trade in regard to all these questions is very much affected by the fact that there is necessarily a considerable interval, both of space and time, between the production of the milk supplied to large towns and its ultimate destination and distribution. That is to say, in large towns, such as London and Glasgow, we have only a very few cows giving milk; yet there are thousands of people who want their supply between five and seven o'clock every morning, and one is almost forced to believe that these thousands think that the milk is taken from the cows on the dairyman's premises as of old; and this is where the first of the complications comes in.

DIFFICULTIES OF THE TRADE.

When our city grew in wealth and population, the cowkeeper was forced to leave and make room for dwelling-houses and places of business, and it thereby has been rendered necessary to employ a merchant or mer-

chants, with shops and vans and carriers of all sizes and all ages, who have to rise early and go forth under all conditions of weather to retail the lacteal fluid. In any case, it is not now a general thing to have a small farm at one's door or a cowkeeper down the lane to dispense the milk warm from the cow as the customers may send for it; but it has to be brought from long distances, from 5 to 100 miles, and in some cases longer distances, to supply the demand of the vast population of this ever-increasing mighty city. This has to be done punctually, systematically, and satisfactorily both to the public and to the authorities, in sunshine and rain, in frost and snow, and last of all, by brave little boys and girls, not to speak of the farmers themselves, their wives, daughters, sons, and servants, who have to rise also very early, some of them as early as three o'clock every morning, Sunday included, and all this has to be gone through from January till December in a business in which there is no monopoly, but an ever-increasing amount of surveillance and of competition. I often think, Is a business attended with such worry and anxiety worth looking after? I have stuck to it, however, for nearly twenty years, and endeavoured, to the best of my ability, along with the directors of the Company which I represent, to try to raise the status of the dairy trade; and I know that there are men here, whom I have the pleasure of associating with, who have been trying to do the same for many years, and that under the greatest difficulties. I know that a question which must always bulk largely in the minds of those engaged in the milk traffic is how to conduct such a business with an easy mind, with a honest heart and clean hands, as much at least as other tradesmen and merchants conduct theirs in dealing with the same public; this is the keynote to the address to which I now ask your kind attention.

VALUE OF MILK AS FOOD.

First, then, as to questions arising out of supply and demand. At the outset, we might ask how far the dairy trade might, with advantage, educate the public as to the value of milk as an article of food, and so increase its demand, for there is no doubt that the value of milk as a food is very much underrated and misunderstood. This holds good not only as regards sweet milk, but also skim milk and butter milk. It is popularly supposed that these last are very inferior in nutritious value, but when the truth is plainly stated the opposite is found to be the case. Even when all the fat is abstracted from sweet milk, the remaining solids are of a most nourishing nature. It is said that, whatever fluctuations may take place, $3\frac{1}{2}$ lb. of sweet milk are equal to 1 lb. of beef in *fleshformers*, for which the dairyman only gets 3d, and in many cases less, and the butcher gets at least from 6d to 1s. Without exception, milk of all standards according to the price we get for it, and according to the quality, is the cheapest of any article of diet on the face of the earth (except perhaps

pease meal or lentils). Take, for example, the analysis of sweet milk and skim milk, thus:—

| | Sweet Milk per cent. | Skim Milk per cent. |
|-----------------------|-------------------------|------------------------|
| Fat | 3.75 | 1.00 |
| Caseine | 3.79 | 3.81 |
| Milk sugar | 3.84 | 4.01 |
| Albumen | 0.54 | 0.49 |
| Mineral matter | 0.75 | 0.83 |
| Water | 87.33 | 89.86 |
| | 100.00 | 100.00 |

Now both these milks are of good standard qualities; but they cannot always be had, so we must try to hit upon a happy medium which will be good for the farmer, good for the public, and good for the dairyman. Thousands of people cannot drink pure, rich sweet milk containing so much fat without injuring the liver and stomach, giving them bile and indigestion, and medical men have to prescribe a medium milk containing *less fat*, but nearly all the other solids, and even this in many cases is too heavy or rich, and they are forced to prescribe skim milk entirely. A great deal could be said on each of those points, so much so that a whole lecture could be given on each head. As to butter milk, its medicinal properties cannot be overrated, and I hold that it should be used in every house every day by old and young. It being a manufactured article there is no legal standard for it; but if the public would give the price for it as they do for good fruit, good wine and whisky I am sure the dairyman would strain every nerve to give it thick enough. Milk as a food will be more demanded and appreciated when its qualities are better understood by the public. More of it will be used, both in simple and ordinary forms, and in combination with other foods, as its relative value becomes better known and understood.

Movements in food reform resulting in greater enlightenment may condemn the use of tea, to a large extent, may lessen the use of alcoholic beverages, may entirely destroy the demand for many things presently regarded as wholesome or nutritious, and the result thereof will be an increased demand for milk and cream of many qualities—from the very highest standard that cows can produce, down to the very poorest of skim milk without the slightest trace of fat.

SOCIAL REFORMERS AND MILK.

There are a great many ways in which social reformers could bring milk of many qualities to the front; and a good thing for the younger members of this trade would be to introduce small pony carts or electric motor cars to go round every working district in Glasgow in opposition to the drink traffic, and sell milk and soda in the summer, hot spiced milk and hot milk and honey in the winter.

(To be continued.)

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Food and Sanitation.

SATURDAY, MAY 8TH, 1897.

BERKSHIRE'S GLORY.

We must frankly own to being mistaken about Berks. There are people who think Toby, M.P., represents it; others live who know it only in relation to the famous Berkshire pigs. A Berkshire distressed agriculturist, the other day, treated us to a tirade against free fraud in food stuffs and a demand for marking everything, be it beef-steak, chop, or slice of bacon, with its origin.

When this Berkshire gentleman had finished his folly, we placed before him the following record of what

he and his fellow fools do to suppress free fraud and give English industries a fair field and no favour.

Berkshire's county analyst, according to the *Reading Observer*, says:—

"I have the honour to report that during the past quarter fourteen articles were submitted to me for analysis by your inspector, and all were found genuine. They consisted of butter, coffee, cheese, lard, and mustard. Four samples of potable waters from various localities have been examined; two were good and two unfit for drinking.

"The Report was passed."

What does this document disclose? It proves that when the Berkshire distressed agriculturists cry for sympathy they deserve kicks. During three months their zeal for suppressing free fraud in foodstuffs has led them to have fourteen samples analysed, and this for a population of 268,357. We have always held that the Local Government Board's recommendation of one sample per 1,000 population is tomfoolery, our own experience proving that at least one sample per 250 population should be taken yearly to protect the public and honest traders. But, taking the Local Government Board's swindling recommendation, where does Berkshire stand? In place of 268 samples per year it is having samples analysed at the rate of 56!!!

We confess we have been mistaken in our opinions of Berks. Toby, M.P., does not represent it, nor does the animal from which the matutinal rasher comes adequately typify the county. It would be a libel on the honest, hardworking and intelligent jackass to state that he is the father of the county.

Berkshire's glory is that it deliberately fosters free fraud, and at the same time whines about the damage thieving Danes, Frenchmen, and Germans do to England's industries. Such distressed agriculturists do not deserve sympathy, they deserve kicks.

TRADE, THE CONQUEROR.

At last Australia, says *The Globe*, appears to have got grip of the right method of dealing with its too numerous rabbits. When all other ways had been tried and found wanting, it occurred to some intelligent mind that the pests were, after all, merely "matter in the wrong place." If transferred to hungry Europe, they would fetch a price which might be sufficient to bring about their destruction for commercial purposes. So some experimental consignments were sent over, and, by superiority of quality, soon forced a way into the British market. From this small beginning has arisen a trade which is estimated to absorb 12,000 rabbits per diem in Victoria alone, the whole being exported. At this rate of destruction, it cannot be very long before the colony is practically freed from an animal that at one time seemed likely to bring ruin to every Victorian farmer. Nor will the nuisance find safe quarters should it determine to migrate to New South Wales. There, also, the local Government is concerting measures for its annihilation, on the same lines that have proved so successful in Victoria. The greatest care has to be taken, it appears, in cleaning, grading, and packing, while the cold stores in which the dead rabbits await shipment have to be kept at a temperature just above freezing point. Canning is no longer in vogue; it added so much to the cost that no profit rewarded the exporter. It is the refrigerating chamber that has again come to the help of our Antipodean cousins, even as it did previously for the conveyance of meat and fruit to the mother country. Not less, either, has that invention acted as a benefactor to the British masses, by placing at their disposal enormous quantities of excellent food at low prices.

NOTTS COUNTY COUNCIL AND THE FOOD AND DRUGS ACTS.

The county analyst had analysed 56 samples under the Food and Drugs Act during the past year, namely, 18 of spirits, 16 of butter, 14 of milk, seven of lard, and one of cheese. Exactly one-half of the samples of spirits were adulterated, again illustrating the fact that spirits were the most frequently adulterated articles. Among the 16 samples of butter, two were adulterated with 20 per cent. of foreign fat. The whole of the milks analysed were genuine, as were also the lards and the sample of cheese. The total number of adulterated samples within the quarter was 11, or 19.6 per cent. of the samples submitted to the analyst.

Major-General Warrant, in moving the adoption of the report, said the committee thought it very desirable that small shopkeepers should not have impediments thrown in their way in bringing their weights and measures to be examined. No doubt many of them were deterred by the fear that there would be a fee to pay. The committee, therefore, thought that this should be remedied. (Hear, hear.)

Mr Oscroft seconded, and the report was adopted.

DISEASED MEAT AT PORTSMOUTH.

At Portsmouth, on April 26, before Mr. Thomas Cousins and Commander Bamber, Jane Richards, a butcher, carrying on business in Canal-walk, Land-port, was summoned on the information of Chief Sanitary Inspector Bell for having seven pieces of diseased meat exposed for sale on Feb. 5. A second information charged the defendant with having nine other pieces in preparation for sale.

Mr. G. H. King appeared for the prosecution, and Mr. Ivens defended.

Mr. King said it was not a case in which the defendant did not know that the meat was diseased. The meat was part of the carcase of a cow which had fever in calving, and died from the disease, or was killed in consequence of it. He read a letter from a Mr. Allen, of St. Helens, Isle of Wight, who said he was sending the carcase, and hoped the defendant would do what she could with it, as it had been a great loss to him. Mr. King asked the Magistrate to inflict a heavy penalty, adding that it was a very bad case.

Inspector Monkcom said that he noticed a cart coming from Messrs. Curtiss's stores in Broad-street. The vehicle was covered and contained the carcase of a cow. He followed the cart and ascertained that the meat was taken to the defendant's premises. This was early in the morning. At four o'clock in the afternoon he went to the premises and asked for the meat that had been taken there. He was shown into a back room by a man named Brading who he had seen on the cart. In the room he saw the nine pieces of meat placed near a refrigerator. Seven other pieces were scattered about the shop. He seized the lot. The meat was taken to the Corporation yard, where it was seen by the Medical Officer of Health and Col. Holbrook, J.P., who condemned it as unfit for food. Witness received every assistance in the matter from defendant. When he asked where the meat was he was taken to the place without hesitation. The defendant stated that she was going to send the meat back as she had paid a good market price for it and it was not as it had been represented.

Dr. Fraser, Medical Officer of Health, said that the meat was very badly diseased. In his opinion the animal had been suffering from fever.

Chief Sanitary Inspector Bell said that there were 214 lbs. of the meat.

Inspector Monkcom, recalled, said that the organs of

the cow were not visible, and the skirting of the carcase had been entirely cut away.

The defence was that the defendant had only been in the trade five years, and, being inexperienced, was not in a position to attend the markets. The man Allen went to her shop and asked her to buy the beast, saying that it was all right. The defendant arranged for him to send it over. When the carcase arrived she was not at home, and the man Brading commenced to cut it up. When Mrs. Richards arrived home she remarked that the meat was not as it had been represented, and she had just given instructions to Brading to send it back when the inspector called.

Brading gave evidence in support of Mr. Ivens' statement.

The magistrates said, however, that they looked upon the case as being a very bad one. If the inspector had not been on the alert the meat would have found its way into the houses of the defendant's customers. The letter which Mr. King read was sufficient to put any butcher, however inexperienced, on his guard. There was a lot of bad meat sold, and the Bench were determined to stop the traffic if possible.

The defendant was fined £17 3s including costs, with the alternative of a calendar month's imprisonment, without hard labour.

LARD.

At Rhyl, on April 27, Ellen Wills, Vale-Road, was charged by Inspector Williams with having sold him 1 lb. of lard which on being analysed was found to be adulterated. The case was adjourned from the last court. Mr. W. F. Lowe, Chester, said that the lard contained 11.2 per cent. of water and 3.80 membrane. It was a very dirty sample, and was swarming with bacteria. The bench imposed a fine of 10s. and £2 1s. costs.

8 SPIRITS.

A SERIOUS MISTAKE.

At Shrewsbury, on April 27, Inspector Croxton (inspector under the Food and Drugs Act) called the attention of the Bench to the summons which had been at his instance issued against Mr. F. Brunt, licensed victualler, of the Bull's Head Inn, Castle Gates, Shrewsbury, in regard to alleged adulteration of whiskey. The case (with another) was before the Court on Thursday, when the Inspector deposed to obtaining a pint of best whiskey from Mr. Brunt. He further stated that he forwarded one of the three regulation samples to Dr. Bostock Hill, of Birmingham, who had returned a certificate that the sample was 41.9 under proof, the standard minimum being 25. As the analysis in the other case was practically identical, Mr. F. W. Williams (who appeared for the defendant) urged that the inspector had made a mistake and had not forwarded Mr. Brunt's sample to Dr. Bostock Hill at all, but had sent two samples of the other defendant's whiskey, and he called Mr. T. P. Blunt, analyst, of Shrewsbury, who deposed to having analysed the sample left with Mr. Brunt by Inspector Croxton, with the result that the whiskey was found above the strength of the legal minimum. In view of this difference, the Bench adjourned the case for three weeks, in order to have the remaining sample analysed by the authorities of Somerset House. Mr. Croxton said he should be very glad if the Bench would allow him to withdraw the summons. He found he had made a mistake, and instead of sending one of Mr. Brunt's samples to Dr. Bostock Hill, he had, by inadvertence, sent two of the samples of the other defendant. Instead of Mr. Brunt's whiskey being 41 degrees under proof, it was really

four or five degrees above the strength of the minimum standard allowed by law. He (the inspector) was extremely sorry that the mistake had happened, and he asked Mr. Brunt to accept his deepest apology and regret.—Mr. Williams, who defended, said his client would accept the apology with one condition, viz., that the inspector paid the expenses to which Mr. Brunt had been put.—Mr. Croxton intimated that he was quite willing to do that.—Mr. Patchett said that on behalf of himself and the other magistrates he had to express their very great regret at what had happened. The inspector had been guilty of a very grave blunder. It was to be hoped he would be more careful in dealing with his samples in future. He ought to be thankful to Mr. Brunt for his leniency in the matter.—The summons was then withdrawn, with costs against the inspector.

GLASGOW MILK-DEALERS PROSECUTED.

AT Glasgow Sheriff Court, on April 30, Sheriff Fyfe presiding, disposed of the following cases:—

JAMES PIERSON POWELL, dairyman, 631, Pollokshaws-road, was charged with having on March 25 sold to Inspector Kerr a pennyworth of sweet milk which was deficient in natural fat to the extent of 37 per cent. He pleaded not guilty, and his defence was conducted by Mr. J. Lumsden Oatts. Evidence having been given by Inspector Kerr and Denovan,

Elizabeth Mackay, the girl in charge of the shop, said she never told her master that she supplied skim milk to the inspector. She told him that she gave the inspector sweet milk.

The respondent said the girl told him that the inspector purchased a sample of milk, and she was in high glee about it. He had seen the milk in the dishes that day, and it seemed in the usual good condition. When he learned the extent of the deficiency it aroused his suspicion, because he could not think of selling milk like that supplied to the inspectors. When he spoke to the girl she told him she had given the inspector skim milk, and he could take what he got. Miss Mackay told him she was prepared to state in court that she gave skim milk to the sanitary inspectors.

The Sheriff: Why did you not get guarantees?

Mr. Powell: I don't think it is customary. I don't know anyone who gets guarantees.

Mr. Oatts suggested that it would be well if the inspectors took samples of both the sweet and skim milk, and, in a case of this kind, an analysis of both could be made.

The Sheriff said this was a case a little out of the ordinary run of these cases, but before dealing with it he would like to take another opportunity of saying to people who were retail dealers of milk that of course the inspectors could only deal with the people who are the medium of transmitting the milk to the public. He quite believed that in a great many cases the parties who were brought up sold the milk as they got it from the farmer; but after the length of time in which these prosecutions had gone on, and he must assume that people read the reports of these cases, especially people in the milk trade, he was very much at a loss to understand why they did not take advantage of the special provision in the Act which was put in for the express purpose of protecting such people, and which provided that they might insist upon having from the wholesale supplier a written warranty, and, if they produced that warranty, and proved to the Court that they sold the milk as they got it, they could get out of these charges. In regard to this particular case his lordship did not offer any opinion as to the question between the shop-girl and her master, but he was inclined to take the view that this must have been a mistake rather than a deliberate infringement of the Act, because he could hardly conceive that any respectable retail milk dealer

would deliberately keep milk on his premises to be sold as sweet which was deficient to the extent of 37 per cent. But if the shop-girl made a mistake the master was legally responsible. The Act took a very strong view of the seriousness of the offence, because the penalty was the large sum of £20; but in the circumstance he restricted the penalty to £4, including expenses.

John Gorman was charged with having on March 25, in his shop at 3, Swan-street, Port Dundas, sold a pennyworth of sweet milk which was deficient in natural fat to the extent of 40 per cent.

Mr. Joseph M'Groary, writer, who appeared for the respondent, said that he pleaded guilty, but he got a printed card from the wholesale dealers, which stated that they supplied "milk and cream of the finest quality, guaranteed pure and unadulterated."

The respondent said he sold the milk to the inspectors in the condition in which he received it. A year ago he got the card which his agent had produced.

The Sheriff said that in future the respondent had better get a written guarantee every morning. The card produced was not a warranty in the sense of the Act. A fine of £3, including £1 11s. expenses, was imposed.

Isabella M'Callum, 102, Maitland-street, Cowcaddens, pleaded not guilty to selling to Inspector Armstrong a pennyworth of sweet milk deficient in natural fat to the extent of 11 per cent.

The Respondent said she got the following guarantee from the dealer: "I hereby warrant that the whole milk Mrs. M'Callum will get from me is genuine and free from adulteration of any kind, pure as it comes from the farmer to me."

The Sheriff said that the retail seller must get a written guarantee delivered with each parcel of milk. At the same time, the terms of the guarantee in this case were about as strong as they could be short of being in the statutory form. He therefore restricted the penalty to a purely nominal one of 30s., sufficient to cover expenses.

THE SALE OF DRUGS.

PROSECUTION OF UNQUALIFIED CHEMISTS.

IN the Glasgow Sheriff Court, on April 30, Sheriff Fife heard several cases, at the instance of the Pharmaceutical Society, against unqualified chemists. The Society was represented by Mr. James Barrie, writer, Glasgow, and Mr. Hill.

William Forrester was charged with having, on November 21, not being a duly registered chemist, at a shop, 443, Eglinton-street, sold by retail a poison, namely, laudanum. Respondent admitted the offence, and explained that the shop was Dr. Robertson's, and that he was an assistant. Mr. Barrie pointed out that the fact that two previous assistants in this shop had been prosecuted went to show that they intended to set the Act at defiance. The Sheriff asked if they could not prosecute the doctor. Mr. Barrie replied that they could not. That was their unfortunate position. They simply employed assistants, and allowed them to dispense poisons without incurring penalties themselves. Some doctors paid the penalties on behalf of the assistant, but the majority did not. The Sheriff imposed a penalty of £1, with £2 of expenses.

John Campbell was charged with selling a quantity of laudanum and a quantity of morphine contained in Powell's Balsam of Aniseed, at Dr. Dunning's shop, 75, Nelson-street, on November 28. He pleaded not guilty, but was convicted, the penalty for each offence being restricted to 10s., with £2 of expenses. The Sheriff expressed the hope that respondent would get his fine paid for him by the doctor.

BRAND'S ESSENCE OF BEEF.

THE *Financial Bulletin* says:—"We hear on the best authority that the proprietors of Brand's essence of beef will shortly come upon the market in the form of a limited liability company. The managing director will be Mr. Thomas Dence, who is chairman of the Linoleum Manufacturing Company, and of the Royal Mail Steam Packet Company. His colleagues on the Board will be Mr. A. F. Dence, Mr. John C. Mason, Mr. Alex. Dence, Mr. J. Sydney Mason, and Mr. Whitehouse, trustee of the late Mr. J. T. Mason."

As the last analyses made for us of this precious preparation disclosed the fact that it contained over 90 per cent. of water and less than 4 per cent. of albuminoid matter, whatever investors may do, the public at large will do well to leave it severely alone. Pure milk is a far cheaper, more readily obtainable, and an incomparably superior article.

LINDSEY COUNTY COUNCIL ANALYST'S REPORT.

THE Public Analyst, Dr. Muter, in his quarterly report, states that 49 samples had been submitted, 45 being genuine and four adulterated. On the samples reported adulterated three persons were summoned, and the cases dismissed, one for adulterated whisky being fined 10s. 6d. and costs.

A REMINDER TO T. W. RUSSELL, M.P.

THE following resolution has been adopted by the Central Council of the National Agricultural Union, and forwarded to the leading members of the Government:—"That this Council desires to express its deep regret than an Adulteration of Foods Bill has not yet been laid on the table of the House of Commons, and earnestly hopes that steps may be taken to legislate on the subject on the lines of the Select Committee's report."

WORKHOUSE MILK.

At the Roscommon Petty Sessions the Guardians of Roscommon Union prosecuted Luke Gilleran, milk contractor, for supplying milk adulterated with 70 per cent. of water.

The defendant was fined at the last Petty Sessions for having supplied milk adulterated with 35 per cent. of water—the fine being 10s. and costs. This case would have gone on at last sessions, but he had not received instructions in time, as the summons should be served seven clear days before the sessions.

Mr. John Murphy, Master of the Workhouse, and

Inspector under the Food and Drugs Act, deposed that defendant was a contractor to the workhouse, and had a bond (produced). On March 7 he took a sample of the milk in accordance with the Act, and sent it to Professor Cameron, from whom he received a certificate (produced). The certificate was to the effect that the sample sent contained 170 parts of milk and water, 5 per cent. non-fatty solids, 70 per cent. of water, 1.6 per cent. of fats, total per cent. of solids 5.6, and that the poorest new milk contains 8.5 per cent. of non-fatty solids.

Mr. Burke asked their worships to impose a heavy penalty, as the defendant was up before.

The defendant said he had no knowledge of it, and there must be some mistake made by the young girl who milked the cow. He admitted the charge, and threw himself on the mercy of the court.

Their Worships imposed a fine of £3, and £1 costs.

BELFAST BOARD OF GUARDIANS AND THEIR BAD MILK.

MISS KATE MEGAHY reported at the last meeting that on Sunday last she visited the house and found that some of the milk supplied looked very inferior. She had sent a sample to the analyst, and the store-keeper had also been ordered to send one to him. She also found that one of the cans in which the contractor's milk was supplied was greasy, and it did not appear to have been scalded.

A Guardian remarked that some samples of the milk looked very inferior to give to sick people and children in the house.

The Master reported that samples of the milk had been supplied by him to the analyst.

Mr. Doran asked had they no power to stop the supplying of milk which was inferior.

The Master said that if the milk was found to be adulterated the contractors could be fined to the utmost extent, but unless it was proved to be adulterated they could take no action.

Why this sapient body of noodles do not consult the local Food and Drugs Act Inspector is, we suppose, best known to themselves.

HENS IN CHINA.

In China the hen is kept constantly busy. When not engaged in hatching her own brood she is compelled to hatch fish eggs. The spawn of fish are placed in an egg-shell, which is hermetically sealed and placed under the unsuspecting hen. After some days the egg-shell is removed and carefully broken, and the spawn, which has been warmed into life, is emptied into a shallow pool, well warmed by the sun. Here the minnows that soon develop are nursed until strong enough to be turned into a lake or stream.

"KURRUWA"

(This word is Registered, and used as a Trade Mark for Best Quality Articles only, and has now become synonymous with quality for the following specialties.)
"We are of opinion that all the products bearing the guarantee of this name may with equal justice receive our highest commendation."—*The Family Doctor*.

"KURRUWA" DELICIOUS, SOLUBLE COCOA.

Manufactured in England on the popular Dutch principle.
ANALYTICAL REPORTS.

"The Laboratory, Bow and Bromley Institute, London, E.
"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average."

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,
"Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London;
"Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8.
This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

"KURRUWA" CHOCOLATE ALMONDS.

"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*."

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

Please ask your GROCER or CONFECTIONER for these specialties, see that they are marked "KURRUWA," and, if you cannot obtain them, write direct to
THE "KURRUWA" ASSOCIATION, 2 and 3, IDCL LANE, LONDON, E.C.

MEAT.

At Birmingham, on April 30, George Adams, 115, Winson Green-road, butcher, was summoned for exposing meat for sale which was unfit for human food. Mr. Hiley prosecuted and Mr. Baker defended. Inspector Wiltshire said that on the 23rd ult. he seized about 46lbs. of meat which was unfit for food. Dr. Hill said that the meat was green, flabby, and mouldy, and gave off an offensive smell. It was dangerous as an article of food. A fine of £5 and costs was imposed.—Georgina Joynes, 125, Constitution-hill, pork butcher, was summoned for exposing the carcase of a porket pig for sale, the same being unfit for human food. Mr. Hiley prosecuted, and Mr. Green defended. Dr. A. Hill described the pig as being very diseased. The flesh was wet, soft, and very offensive. Mr. Parker, veterinary surgeon, described the pig as being absolutely unfit for food. Mr. Green said that the pig was placed in the shop by inadvertence, and defendant herself was not aware of the condition of the pig. The person who consigned the pig to defendant stated that he saw no trace of disease about the animal. A fine of £5 and costs was imposed.

At Guildhall, on April 29, before Mr. Alderman Vaughan Morgan, Frederick Randall, a farmer, of Carsfield, Woodbridge, Suffolk, was summoned for being the owner of four pigs' carcasses which were deposited in the Central Meat-market for the purpose of sale, the same being diseased and totally unfit for human food.—Mr. Vickery prosecuted on behalf of the Commissioners of Sewers.—Inspector Seeson gave evidence of the seizure.—Chief Inspector Terrett said the carcasses were in a very bad state. The kidneys had been removed, which was quite an unusual thing.—Superintendent Hubbard, of the Suffolk police, deposed that he called upon the defendant in respect to these pigs. The accused told him that the kidneys were buried.—The defendant, in answer to the charge, said he called a man in to kill the pigs, and as he told him they were all right he sent them to London. He had not the slightest idea that the meat was bad. He was a district councillor, and an overseer of his parish.—Hubbard was recalled by the alderman, and said he had known the defendant for many years as a most respectable man.—The Alderman remarked that this was a serious offence, but believing that the defendant relied upon the man who killed the pigs as to the condition of the meat, he mitigated the penalty to £10 and £2 10s. costs, or a month. The money was paid.

At Clerkenwell, on April 28, Charles Godden, a cattle dealer, of Boxford, Essex, came up for judgment in respect of a summons taken out by Sanitary Inspector Billing, of the Holborn Board of Works, for depositing, in October last, four quarters of diseased beef at Link's then premises, Cowcross-street. This was a consignment for receiving which the London meat salesman was recently sentenced to four months' imprisonment. Mr. Bros said the principle offender had been punished, and the present defendant had assisted the prosecution in securing conviction. Sending bad meat to London was so serious an offence that imprisonment was the punishment usually resorted to by that Court, but, as Godden was not the worst offender, he fined him £15.—Arthur Street, butcher, of Tunbridge Wells, was summoned by Inspector Billing for depositing four quarters of beef which was diseased at a meat salesman's premises in Charterhouse-street. Mr. Bros, after hearing the evidence, said the fact that the defendant himself ate the kidneys of this animal showed that he did not think the meat bad, but he must warn him that ignorance would not protect him. Under the circumstances, he imposed a penalty of 42s.

BUTTER.

At Marylebone Police Court, on April 8, before Mr.

Curtis Bennett, Jonathan Edward Cockerton, cheese-monger and provision merchant, of Fleet-road, was summoned by the Hampstead Vestry for selling "butter" adulterated with fifty per cent. of foreign fat.—Defendant was fined 40s. and 12s. 6d. costs.

JAMES FARLEY, grocer, of Fleet-road, was also summoned for selling "butter" adulterated with ninety-five per cent. of foreign fat, and was fined £5 and 33s. 6d. costs. Mr. A. P. Johnson, solicitor, the Vestry Clerk, stated that defendant was convicted and fined in July, 1896, for selling coffee adulterated with sixty per cent. of chicory.

At Southport, on May 3, Ellen Rimmer, grocer and provision dealer, Rufford-road, Crossens, was summoned, under the Food and Drugs and the Margarine Acts, for selling adulterated butter. Mr. S. Brighthouse prosecuted on behalf of Mr. J. Parkinson, an inspector of the Royal Lancashire Agricultural Society, and asked, if the case was proved, for the infliction of an exemplary penalty. The Inspector stated that he called at the defendant's shop on April 8, and purchased for 9d., three-quarters of a pound of butter. The public analyst certified that it contained foreign matter to the extent of 50 per cent. of the total fats.—The Bench said they did not think the defendant knew the butter was adulterated, and they inflicted a nominal penalty of 2s. 6d. and costs. The defendant was fined a similar penalty for not labelling margarine.

WILLIAM BOND, grocer and provision dealer, Crossens, was summoned for two similar offences, and Mr. Cook, in defence, called a man employed by the wholesale dealers from whom the defendant purchased the butter. The witness stated that the defendant's daughter asked for butter, and he gave her margarine in mistake. A fine of 2s. 6d. and costs in each case was inflicted, and the Mayor said it was strange that wholesale dealers should be permitted to sell adulterated butter, considering that Southport had a public analyst and inspectors. He thought that retail dealers, when purchasing butter, should ask for a written warranty.

At the Doncaster West Riding Court, on May 1, John Richard Hudson, butter dealer, Sheffield, was charged with selling adulterated butter at Mexboro', on Mach 23.—Mr. Neal, of Sheffield, defended.—Frederick Uttley, provision dealer, Mexboro', was summoned for a similar offence on the same date.—Mr. J. Wilson, inspector for the County Council under the Food and Drugs Act, proved that he purchased 1lb. of butter in each case, and on being analysed it contained 40 per cent. of butter and 60 per cent. of margarine. In the first case it was said that the butter had been placed in the wrong place, and the second, Mr. Braddiley said the label had been accidentally removed, and it was a very difficult matter to detect one from the other except by the taste.—The magistrate convicted in each case, and imposed a fine of £5, including the costs.

THE FOOD AND DRUGS ACT IN HERTFORDSHIRE.

THE report of the County Analyst, Mr. Arthur E. Ekins, states that during the quarter ended March 31, 1897, forty samples of food were submitted as follows:—25 of butter, 12 of milk, one of margarine, and two of coffee. Of these, five samples of butter and one of milk were adulterated.

Mr. Ekins adds: "I am sorry to have to remark upon the continued high adulteration of butter (20 per cent.) in this county. According to the last report issued by the Local Government Board the average adulteration of butter for the whole of England was only 8·5 per cent., and taking into consideration the fact that Hertfordshire is an agricultural county, it seems a great pity that there should be so much margarine sold as butter."

ACTIVITY IN LAMBETH.

MR. G. W. MARSDEN, solicitor to the Camberwell Vestry, appeared, before Mr. Denman, on April 29, in support of a number of summonses, issued at the instance of that body, against tradesmen for offences under the Foods and Drugs and Margarine Acts.—Mary Peart, of Westdown-terrace, Camden-street, Peckham, was summoned by Inspector Stevenson for exposing a parcel of margarine for sale without having the same properly labelled, and was ordered to pay a penalty of 40s. and costs.—Christopher A. Jinman, of Forest-hill-road, was summoned by Inspector Collins for selling sugar not of the nature, substance, and quality of the article demanded by the purchaser.—Inspector Morley went to the defendant's shop and asked for some Demerara sugar. He was served with an article which the analyst came to the conclusion was dyed sugar other than Demerara.—The defendant said his assistant, who had only been with him a few days, served the sugar in mistake for Demerara.—Mr. Denman ordered the defendant to pay a penalty of 40s. and costs.—Joseph Gosling, of Crebar-street, East Dulwich, was summoned for selling cocoa containing 17 per cent. of added starch.—The cocoa was sold at the rate of 1s. per lb., and the defendant declared that it was impossible to sell pure cocoa at that price.—Mr. Denman remarked that the price was immaterial as cocoa was asked for, and fined the defendant £5 and costs.—Henry Smith, of Rockell's-terrace, Forest-hill-road, was summoned by Inspector Collins for selling cottonseed oil as olive oil.—The defendant explained that the sample was taken at a shop which he had recently acquired as a branch, and was part of the stock taken over from his predecessor.—Mr. Denman imposed a fine of £3 and costs.—Robert Joyce, of Albany-road, was summoned by Inspector Heath for selling margarine as butter.—The defendant, who said the margarine was served in mistake by an assistant who was new to the business, was fined £5 and costs.—Mr. Joyce was also summoned for selling as Demerara sugar an article which was other than Demerara, and was ordered to pay a fine of 40s. and costs.—A. E. Simmons, of Ivanhoe-road, Nunhead, was summoned by Inspector Chadderton for selling as Demerara sugar an article which was other than Demerara, and was fined 40s. and costs.—Charles Bone, of Avenue-road, was summoned by Inspector Kerslake for selling coffee containing 95 per cent. of chicory, and was ordered to pay a penalty of £5 and costs.—Naylor, of Avenue-road, was also fined £5 and costs for selling coffee containing 60 per cent. of chicory, and John Evans, of Denmark-road, was fined £3 and costs for exposing a parcel of margarine for sale without a label.

WICK COUNTY COUNCIL AND THE ANALYSIS OF WHISKEY.

INSPECTOR SWANSON bought three samples of whiskey sold at last Lukemas market and sent them to Dr. Hunter, Edinburgh, for analysis. The analyst reported as follows:—No. 1.—Alcohol by weight, 40·95 per cent.; proof spirit, 84·70 per cent.; fusil oil, none; methylated spirit, ash and residue, 0·08 per cent. The percentage of alcohol in this case is high, but the spirit is a very low class.

No. 2. This is a fairly good whisky, and contains as follows:—Alcohol by weight, 38·90 per cent.; proof spirit, 80·90 per cent.; fusil oil, trace; residue, 0·096.

No. 3. This whiskey is of sufficient strength to bring it into the genuine class, but all the same it is a low class spirit. It contains:—Alcohol, 37·47 per cent.; proof spirit, 78·07 per cent.; fusil oil, none; residue, 0·043.

The Convener, in reading these reports, did not mention the names of the publicans referred to, but

several members insisted that they should be given, that they might know where to get a good dram. The names were then given.

BACTERIOLOGY IN EXCELSIS.

BACTERIOLOGISTS now proclaim the dangers which lurk in the swimming bath. A learned (?) professor, who has been examining the water in the public baths at Berlin, finds that in a typical case where the water was only changed once in twenty-four hours, at the expiration of that time it contained 270,000 bacteria to the cubic centimetre, or 270,000,000 to the litre, which is rather less than a quart. Sewer water is considered bad when it holds only 80,000,000 of bacteria to the litre. Dr. Sabourand says that ordinary baldness is "the most abundantly and most purely microbic malady known in the skin."

Another microbe-monger is investigating the causation of the incapacity of certain analysts to analyse anything but fees and so on. Some day an outraged public will rise against the bunkum brigade.

COFFEE.

AT Tamworth Borough Police-court, on April 28, Alfred Sadler, grocer, Tamworth, was summoned by Harold van Tromp, Inspector under the Food and Drugs Act to the Staffordshire County Council, for having sold, on February 9, coffee adulterated with 49 per cent. of chicory. Mr. Willcox (Wolverhampton) prosecuted, and Mr. R. Nevill (Messrs. Nevill, Atkins, and Matthews, Tamworth) defended. On the date named, Mrs. Heatherley, wife of a police-constable at Smethwick, purchased a quarter of a pound of coffee at defendant's shop, for which she paid 4d. Analysis showed that it was adulterated with chicory, which Mr. Willcox said could be purchased at from 3d. to 4d. per pound, to the extent of 49 per cent.—The defence was that it was handed to the purchaser wrapped in a paper upon which was printed, "This is a mixture of coffee and chicory." Mr. Nevill produced tins of Colman's mustard and Epps's and Fry's cocoas which bore similar announcements.—Mr. Willcox said they were well-known preparations: there was no coffee known as Sadler's mixture.—Mr. Nevill replied that the coffee and chicory mixture was known in the trade as the "coffee of commerce."—Mr. Ferrabee Sadler, nephew to the defendant, stated that if a purchaser asked for best coffee the pure article was supplied. In this case 4d. coffee was asked for.—After a long legal argument the Bench held that the printed notice on the wrapper was insufficient, and imposed a fine of £2 and costs—£4 13s. altogether.—Notice of appeal was given.

William Willis Glover, grocer, Colehill, for having sold coffee adulterated with 35 per cent. of chicory, on the same date, was fined £2 and costs.

MARGARINE.

AT Worship-street, on April 27, Mrs. Elizabeth Evans, shopkeeper of Brady-street Bethnal-green, was summoned for selling as butter an article adulterated with foreign fats.—Mr. W. T. Ricketts prosecuted for the Pure Butter Association, Mr. Margetts defending.—It was admitted in the course of the hearing that the prosecuting association is a number of merchants who aim at the removal from the markets of the article known as margarine, except under such conditions of sale as would ensure the protection of the public who wished to buy "margarine." In this case it was shown that an agent of the association asked at the defendant's shop for "butter" which was advertised at 10d. per lb., and was served with an article which was proved to be

margarine.—Mr. Margetts submitted that margarine was a wholesome article, and that only a technical offence had been committed.—Mr. Corser imposed a fine of 20s., and allowed the association 33s. 6d. costs.

MILK.

RICHARD ISAACS, dairyman, of 2a, Ashmore-road, St. Peter's Park, was convicted at Marylebone, on April 29, of selling milk, on two different dates, adulterated with 7 and 10 per cent. of added water, and was ordered to pay £2 fine and £1 5s. costs.

At Grimsby, on April 29, Kate Epton, Welholme-road, was charged with selling adulterated milk.—Mr. H. F. Moody (Borough Sanitary Inspector) proved the offence.—Mr. Bloomer appeared for defendant, who pleaded guilty. He said that it was a very difficult case to deal with, and he was quite sure that defendant was really and truly, so far as she was concerned, innocent of the charge. After the cows had been milked on the day when the offence was committed, the milk was divided into two parts, with the result that one lot was taken to be sold and the other allowed to stand. The cream naturally accumulated on the surface of the standing milk, and the husband came and took about four pints of milk out of it. Thus he had, unwittingly, deprived the other milk of its fair share of fat. This was where she had got the sample she sold to the inspector.—The Magistrates decided that, under the circumstances, they would deal leniently with defendant, and would fine her £1 1s.

At North London, on May 3, Jane Thompson, of Rosina-cottages, was summoned by the Hackney Vestry for selling as pure milk an article which was found on analysis to have 18 parts of added water. The offence was proved by Sanitary-inspector Punter and his daughter, so far as the purchase was concerned; and the analyst's certificate proved the rest. The defendant said she sold the milk as she bought it from the wholesale dealer.—Mr. D'Eyncourt: You ought to get a guarantee from the wholesale dealer in order to protect yourself. Fined 5s., and 12s. 6d. costs.

George Harman, of Pleasant-place, Lea-bridge, summoned for selling milk, purporting to be pure, to which 13 per cent. of added water was shown by analysis to be present. He also said he sold it as he bought it; but Mr. D'Eyncourt, telling him how to protect himself against the wholesale dealer, fined him 10s. and 12s. 6d. costs.—The defendant: Have I any remedy against the man who supplies me?—Mr. D'Eyncourt: Yes, certainly. You may have an action for damages against him.

James Perfect, of Prout-road, summoned for having 12 per cent. of added water in the sample of milk that was taken by the same inspector, pleaded that he also had been defrauded by the wholesale dealer—the same dealer as supplied the defendant in the last case.—Mr. D'Eyncourt said it appeared as though the wholesale man was in fault; but the retail men must get the guarantee to protect themselves. Fined 10s. and 12s. 6d. costs.

At Kensington Petty Sessions, R. W. Morton, dairyman, of 12, St. Alban's-road, Kensington, was summoned by the Vestry for selling milk from which 10.5 of fat had been abstracted. Mr. W. C. Leete represented the Vestry, and Mr. W. Ricketts the defendant.—Inspector Ellenden stated that on the 27th ult. he visited defendant's shop, and asked to be served with a pint of milk. He was served by Mrs. Gale, the manager's wife, paying 2d. for the article, and now produced the analyst's certificate. After the purchase, the manager came into the shop and said the milk came from a Mr. Bucknell, of Upton, Berkshire, and that it was "all right."—Mr. Ricketts having explained how the milk was bought by defendant, said that it was brought direct from the railway station, and sold just

as it was received. The churn bore a label in Mr. Bucknell's handwriting, warranting the milk to be pure and having no fat abstracted.—Frank Wooding deposed to bringing the milk from Paddington to defendant's shop on March 25.—Mr. Leete: Was the churn locked?—Witness: No. It was only closed by a brass fastening.—Mr. Haswell: It could have been opened then?—George Gale, manager to defendant, gave evidence as to receiving the milk from the last witness. The warranty label was then on the churn.—By Mr. Leete: The milk might have been tampered with between the station and defendant's premises.—Defendant himself spoke as to the milk being warranted. He had always found it to be pure.—Ultimately the Bench decided not to convict.—F. Billing, of 69, Portobello-road, was also summoned for selling milk from which a certain portion of the original fat had been abstracted.—Inspector Hawkins having proved the case, defendant was fined £1 and costs.

FALSE MARKING OF HAM.

At West Ham, on April 28, J. R. Roberts's Stores (Limited), of the Broadway, Stratford, were summoned for unlawfully applying a false trade description to a ham, and with selling the ham to which the false description had been applied; and there were two informations against Arthur J. Shrimpton, as servant or agent for J. R. Roberts's Stores (Limited), for the same offence.—Mr. Norton Smith prosecuted; Mr. Geoghegan defended.—The proceedings were taken under the Merchandise Marks Act at the instance of the Bacon Curers' Association.—On February 15, two officers of the Association went to Roberts's provision department. At the door, Arthur J. Shrimpton, a salesman, was asked the price of some hams in the window, and Shrimpton told Mr. John Moore that they were 9½d. a pound. Asked if they were English hams, he said "They are," and, inviting Mr. Moore to the counter, he produced two of the hams. Selecting one, Mr. Moore asked if it was English, and Shrimpton said, "Yes, it is." Moore bought it for 6s. 10d., and when the account was presented, Mr. Moore pointed out that the word "English" had been left off the invoice, adding, "I want the word 'English,' as I have bought it as English." Shrimpton then inserted the word in the invoice, which was checked by another assistant. The shopwalker was then spoken to, and Mr. Moore read to him the notes he had taken and what had occurred. The ham was a Canadian ham, London smoked, and Mr. Moore declared that it was "got up" to represent an English or Irish ham; but Mr. Brice, a man with 25 years' experience of the trade, said he could not state that when American and Canadian hams came over they were "doctored," but they were certainly "trimmed." Canadian or American hams were cured in the places whence they came, but most of them were smoked in England.—The defence was that the ham was sold as an English-cured ham, an expression well known in the trade.—Shrimpton gave evidence in the case against J. R. Roberts's Stores. He said he described the hams as London-cured to Mr. Moore, who, when he had bought one, said, "I am buying it for a friend in the country, and I want him to know it is an English ham." The invoice was originally made out without the word "English," which witness then put in "to oblige" Mr. Moore. When Mr. Moore went to the shopwalker he was told he had used unfair means to obtain the word "English" on the bill.—At the close of the case, Mr. Baggallay said that two witnesses were called as to what took place, and both said that the ham was described as English before the invoice was made out, while Shrimpton admitted that he put the word "English" on the bill though he knew it was an untrue description. He held the case proved, and imposed a fine of £5 and £3 3s. costs against the Stores for selling the ham to which a false trade

description had been applied.—The second information and the two informations against Shrimpton were then withdrawn.

MILK—AND HOW TO SELL IT.

(Continued from page 214.)

It may not be out of place to mention particulars which I have from a table constructed by Joseph Spencer, and from figures published in 1882 by the late William Hoyle, that we pay nearly four times as much for intoxicating liquors as we pay for butter and cheese; that we spend four and a half times as much upon drink as we spend upon milk; and that we spend more upon drink than the rent roll of all the farms and all the houses in the United Kingdom. Those interested in the dairy trade may do much to correct mistaken customs, and to spread enlightened views upon this important subject.

Some sixteen years ago, I asked the Town Council of Glasgow to allow us to erect small kiosks in populous places for the sale of milk in cups and tumblers to the working classes, in order to encourage sobriety amongst them, but they could not see their way to do so then. Perhaps, if someone else asked them now, seeing that we have so many gentlemen in the Council that are teetotalers, the request might be granted. I am a great believer in all classes of the community, rich and poor, young and old, having abundance of fresh air, pure water, and all qualities of milk, cream, and butter milk as they are able to afford them, and as they agree with their constitutions. To those who do not feel inclined to introduce pony carts with hot milk, &c., surely it is not too much to suggest that all the dairymen who keep shops should sell such within their own premises; and, before many years are past and gone, you may have the pleasure of seeing every street in Glasgow flowing with milk and honey.

QUALITY AND PRICE.

Now, then, as to quality and price. This part of the subject presents a matter well worthy the serious consideration of all engaged in the milk trade. The public seem to have two voices in dealing with their dairymen, and to have an idea that milk differs from every other commodity in being naturally fixed and uniform in its quality. This mental confusion of the public is reflected in the legislation regarding the standard for sweet milk. Now, we who are in this trade, and work it from day to day, and who have served a very dear apprenticeship to it in all its details, must surely know a little more about it than any outsider. We know quite well that sweet milk from different localities, different pastures, different feeding generally both winter and summer, and different ages of cows, is as variable as regards standard estimation as any other product of nature or manufacture. The quality of sweet milk in relation to any standard is due to the influences bearing on milk secretion, breed, food, period of the year, time from parturition, temperature, temperament, cleaning and grooming, and gentle treatment, or the reverse. The ranges on an average of solids in sweet milk are from 11.5 to 13 per cent. The specific gravity varies from 29 to 32. The average annual yield of an Ayrshire cow is said to be 600 gallons during nine to ten months of the year, and the quality fluctuates during the course of that time. In every other commodity but milk this same variability in relation to a maximum or minimum standard is expressed and adjusted in price, and the public recognise price as their measure of quality, and buy accordingly. Every business in other commodities has its own methods of adjusting this still further by selling some things at so much the bottle, so much the tin, so much the box, so much the yard, so much the pair, so much the dozen, so much each, or so much per pint; a pan loaf, a French loaf, or any other fancy

loaf; cookies, scones, biscuits, and cakes of all kinds; knives and forks, boots and shoes, and countless thousands of other articles at prices and qualities to suit all buyers, and both equity and interest are consulted by the respective trades in these arrangements; and why not?

STANDARD FOR MILK.

By all means, I say emphatically, let us have a good standard for poor, genuine, sweet milk, and let the farmer be well paid for raising it, say, if you like, on the same principle that he gets for his wheat when it weighs 63 to 68 lb. per bushel, or on the same principle that he gets for his full cheese, butter, or good, dry, mealy potatoes, &c. Let us now for a moment imagine the public and the legislative theories applied to milk and the dairy trade being applied to other trades and commodities, say a standard for wheat, oats, barley, potatoes, beans, peas, fruit, fish, butcher meat, poultry, rusks, biscuits, aerated waters, and thousands of other things which we eat, drink, and wear. The public would at once say that it was impracticable; so would medical men, so would members of Parliament, and, I believe, so would every dairymen, because in practice it would not work—the thing would be preposterous. And it is equally preposterous and unworkable nowadays to force it on the retail milk trade.

As I have already said, we must have a standard to buy by, and we must have a standard to sell by, but above or below these standards both the farmer and the dairymen ought to be paid. Then the dairymen can honestly say to his customers, as other merchants say to theirs, What quality do you want? and, according to quality, so is the price. There is no objection to laws restraining from adulteration and fraud; but the dairymen must insist upon being allowed to sell what the public want at his own price, the same as other merchants do, but he must not be allowed to palm off coloured skim milk for sweet milk. I have served the public for over thirty years, and I have always told them the differences in quality. As a rule, I have always got my price, so will everyone who does likewise. Customers now and again will be dissatisfied or difficult to please; then, in that case, ask them politely to go elsewhere, and if we all act on the same principle, what one friend loses another friend will gain. You have nothing to fear in being straightforward and honest. Judge by yourself in buying anything you know little about. You tell the tradesman or merchant what you want, he tells you the price and quality, and if you are satisfied from time to time with all you get, you very likely continue your custom; but if you get an inferior article as compared with the price you paid, you simply do not go back, because you feel you have been imposed upon. Now, any man wanting to keep his customers and do a respectable trade will never condescend to mean and dishonest tricks; everything with him is honest and above board. It is this that has made the British nation, and caused it to be trusted in every corner of the world. But at the same time, there are dishonest men to be found in every trade and profession, and it is desirable that a penalty should be placed upon all acts and forms of imposition in trade, from the building of a house to the selling of a horse; but every regulation or custom is objectionable which places difficulties and dangers in the way of traders classifying what they have to sell.

EDUCATE THE CUSTOMERS.

Some families can only afford to pay 7d. per week for their milk supply, some can afford to pay from 20s. to 40s. per week: the first of these must have quantity, and insist upon delivery at six o'clock every morning, and in many cases these customers live three stairs up. The other wants quality, perhaps of the very highest. Then there is another class, all most respectable and well-to-do people, who get several shillings' worth a week.

(To be continued.)

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Food & Sanitation

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Food and Sanitation.

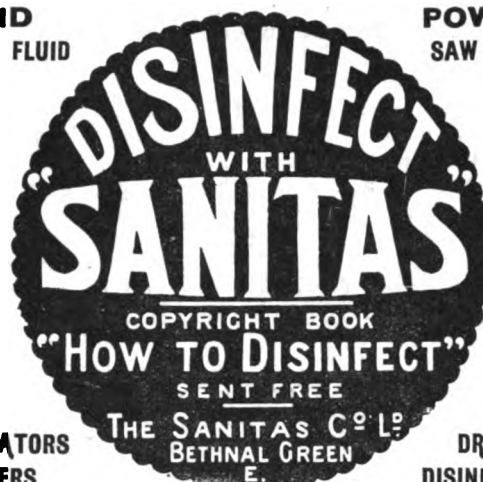
SATURDAY, MAY 8TH, 1897.

FOOD-COLOURS.

AMONG the important questions that have arisen in consequence of the attention given to the composition of food products, is that of artificial colouring. Much of the colouring of food is traditional and æsthetic and is not intended to deceive. Thus candies are obviously coloured to please the eye, especially giving variety to the confectioner's stock; butter and mustard are coloured without any intention to deceive as to

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quality or purity. Of course the imitations of such articles are also coloured, but the primary intention to deceive is in the manufacture of the substitute. On the other hand, colours are often used to conceal inferiority or falsification. Skimmed milk is coloured to give the appearance of richness; dilute alcohol is coloured to imitate wine, and acetic acid is coloured to imitate cider-vinegar. The sanitary chemist must carefully distinguish between these two purposes in the case of colours. With candies, butter, mustard, and similar instances, the question is the wholesomeness of the colour used, but the colouring of milk or spirits is essentially a deception to the injury of the buyer or user and may be prevented on that basis alone without reference to the wholesomeness of the colour used.

When we come to consider the question of the wholesomeness of colours we meet some serious difficulties, and very liable to do serious injustice unless we keep clearly before us the object of the inquiry. It is now generally known that most colours are artificial products derived from coal-tar. They are commonly designated "aniline colours," but many of the most used forms are not made from aniline. It is, therefore, rather more exact to designate them as the coal-tar colours. There are very many forms, and the number is rapidly increasing, as the result of the scientific research carried on in Germany, which has long led the world in this industry. The composition of these colours is generally highly complex, and their systematic names long and awkward, for which reasons they are generally sold under trade names that give no indication of their composition or relationships. The colours produced in the earliest period of the industry were not permanent and were liable to dangerous impurities, especially arsenic, but the modern products are more permanent and purer. Features that are common to many are solubility in water and high colouring power. These make them suitable for use in food, and we find, therefore, that they have come largely into use as food-colours, and the detection of them and judgment of their effects are often problems presented to the food-analyst.

Concerning the physiologic effects of the best known colours when administered in appreciable doses there is scarcely any trustworthy literature except that found in a work by Theodore Weyl. These investigations were carried out in the manner usual in laboratory investigations in physiology and therapeutics, that is upon the lower animals, principally dogs and guinea-pigs, by regular or forced feeding, or by subcutaneous or intra-abdominal injection. It is obvious that all injection experiments made prior to the introduction of antiseptic precautions are valueless, since the possibility of microbic infection is not eliminated. There are, however, other sources of error in these methods to

which attention should be strongly directed. In many cases the doses given are out of all proportion, and the effects in such doses cannot justly be considered as indicative of the effects when used in food. Thus Weyl in studying the action of the colour commercially known as Soudan I (anilin-azo-beta-naphthol), which has been used for colouring butter, oils and liqueurs, administered to a dog weighing 11,900 grams (27 pounds) four doses, two grams (thirty-one grains) each, at intervals of two days, until eight grams had been taken, then after an interval of eight days raised the dose to five grams (seventy-seven grains), and found after two doses had been given that there was a slight disturbance. He concludes that the colour is not entirely harmless, but it seems to us that such an inference is unfair. A dose of seventy-seven grains to an animal weighing twenty-seven pounds is equivalent to about one ounce to a male adult, a dose more than a thousand times as great as that likely to be taken, for it appears from figures in our possession that the proportion of colour used in different articles is so small that much less than a grain will colour the amount of food usually eaten at a meal.

We must also throw to one side all experiments by subcutaneous or intra-abdominal injection, for these are not the methods by which the colours are introduced into the human system, and it must be very difficult, even under common antiseptic precautions, to eliminate the influence of microbes which may be mixed with the colour itself.

A similar error effects some obstructions lately published tending to show that food-colours interfere with the action of digestive agents. This is an interesting field of inquiry, but in the experiments published the doses used were too large; the smallest amount employed was about one grain, whereas when that colour is used for jams and jellies, for which it is quite popular, the amount is such that several ounces of the material would have to be eaten to include one-third of a grain of the colour.

It is our opinion, therefore, that there is no good reason for regarding the standard coal-tar colours as unfit for use in food. The quantity is so small that it is not reasonable to suppose that any toxic effect will follow. The probability is that many of these colour are analogous in composition to those found naturally in fruits, flowers and seeds, and it is mere assumption that the natural colours are more wholesome than the artificial. Of course, it is taken for granted that the colours are free from mineral impurities; that point can be readily ascertained, and the commercial colours are now almost all satisfactory in this respect. All the coal-tar colours, being organic, are readily decomposed in the system, and hence cannot act as cumulative poisons. It seems, therefore, that it is at present merely the duty of sanitary authorities to ascertain what colours are used and in what amounts, and that restrictive action is not called for.—*Dietetic and Hygienic Gazette*.

THE PROPOSED ANALYTICAL COURT OF REFERENCE.

Two years ago such opinion as existed about a Court of Reference was found to favour the proposal that the Society of Public Analysts should be represented upon it. To-day we regret to find there is a strong feeling existing that on no account should the society be represented on such a board.

Last week the representatives of the principal Irish industries waited on the Irish Chief Secretary. In asking for prompt legislation to strengthen the Acts against adulteration, the spokesman (Mr. R. Hickey) said:—

“With regard to adulteration by water, the committee which sat during 1894-5-6 suggested that a Board of Reference should be established for the pur-

pose of settling the proportions of the ingredients of pure butter. The late Manchester cases illustrated the importance of this subject. There was no legal standard of the water in pure butter, but the public analysts had set up one of their own. He desired to speak of them with all possible respect, but felt bound to say that they worked by rule of thumb, having no practical knowledge of butter manufacture. A Board of Reference such as had been suggested would, if properly constituted, meet the difficulty. It should be half scientists and half traders, the former including eminent private analysts, but no public ones. The butter trials at Manchester compelled the trade to spend over £600 to prove that pure butter might honestly contain 20 per cent. of moisture. Traders had been summoned for having over 16 per cent. of water in their butter, and the city analyst of Manchester declared on oath that water was not essential to butter. The fact was, however, that it was impossible to make butter without water, and the deputation wished to make sure that gentlemen like the city analyst of Manchester should not find a place on the proposed Board of Reference. There were 235 public analysts in England and Wales, and hardly 25 per cent. of them were paid by salary. The rest were paid by fees. They had merely nominal salaries. It was not unfair to assume that they were not disinterested in the bringing of prosecutions for adulteration.”

The Chief Secretary said that a Bill dealing with the subject brought forward by the deputation was in an advanced stage of preparation, and would, he trusted, be introduced this session. If not it would be brought forward next session, and he anticipated that much, if not all, of what his hearers asked for would be found in the measure. Not being himself in charge of it, he could not make a definite statement, but he understood that its framers desired that justice should be done for the Irish butter trade. He sympathised with the desire for Irish representatives on the suggested Board of Reference, and would consider whether it would not be possible to follow the example of the Danish butter trade, who had in London an inspector charged with the duty of prosecuting for fraud. (Hear, hear.)

Mr. Dillon, M.P., on behalf of the deputation, expressed satisfaction with the Chief Secretary's statement.

Mr. Alfred Firby, I.I.C., writes:—

“The case in which a dairyman was lately convicted at the Hammersmith Petty Sessions is one where the convicted individual has been fined, not for deficiencies, but in reality for excesses.

“The facts are as follows:—The total solids were given at 12.99 per cent., of which 4.80 per cent. ranked as fat, 8.18 per cent. as non-fatty solids.

“As against the standard of the public analysts, there appeared an excess of 2.06 per cent. of fat, and at least 1 per cent. in the total solids.

“To those acquainted with the details of milk analysis, these facts certainly indicated an error having been made in the estimate of the fat, and consequently in the non-fatty solids, which would be taken as the basis upon which to assume adulteration.

“In another case, a charge of abstracting 10 per cent. of fat was afterwards cleared by the authorities at Somerset House.

“A diversity of opinion may be taken as inevitable in such cases as these, and it is well known how many conflicts of the kind have occurred between the Government and other official analysts.

“Despite the majority of opinions appearing against the former chemists, one cannot but conclude that they are more often upon the side of logic and common sense than some chemists would wish us to believe.”

At North London, on May 10, Mr. D'Eyncourt was occupied nearly the whole afternoon in dealing between Somerset House and the Society of Public Analysts as

to the analysis of milk. A milk dealer, Sarah Brown, of Shrubland-road, Dalston, had been summoned by the Hackney Vestry for selling milk to which Mr. Leo Taylor, the public analyst of Hackney, certified that six per cent. of water had been added. This certificate was practically endorsed by Mr. Otto Hehner, Mr. Bernard Dyer, and Mr. Bevan (public analysts). But an independent analysis of a sample of the same milk at the Government Laboratory at Somerset House declared that the milk did not show any conclusive evidence of added water. The case had been twice adjourned, and now Mr. Bannister, of the Government Laboratory, was called to support his contention. There was a lengthy examination and cross-examination as to the specific gravities, the solids and fats, and ash, etc., but the whole thing resolved itself into which was the correct method of milk analysis, that employed by the Society of Public Analysts, or that adopted at Somerset House — admittedly different. — Mr. D'Eyncourt said he believed that all the witnesses had spoken fairly. But where there was a difference of opinion as to methods of analysis he would not pretend to decide. Summons dismissed.

Those reading between the lines can understand the increasing objection of traders and M.P.'s to giving the public analysts places on the Board of Reference. Traders generally, M.P.'s, and the public are weary of these "expert" differences, and the result of their weariness will doubtless find expression in the new Bill. We are sorry to note this, but the toadying of the supposed great always results in the supposed great despising the toadies. A study of Swift or of Rabelais would have taught the persons responsible for this present position that to fight against wrong is right; to toady is to seek contempt and get it.

APPEALS.

A WARRANTY QUESTION.

DERBYSHIRE, APPELLANT, *v.* HOULISTON, RESPONDENT.

THIS matter came before the Court of Queen's Bench, on May 6, upon a case stated by Manchester magistrates in reference to a conviction by them under the Sale of Food and Drugs Act of 1875.

Mr. C. A. Russell, Q.C., and Mr. Mellor were for the appellant; and Lawson Walton, Q.C., and Mr. Reginald Brown for the respondent.

The case sent up set out the following facts:—On August 22 the appellant, a provision merchant in Manchester, purchased a quantity of butter from a person named Maloney, and took from him a written warranty that it was of the nature, substance, and quality demanded of him. On September 8, Mr. Martin Hopkins purchased some of this butter from the appellant, and took from him the same warranty as to it being pure butter. On September 16, the respondent, who was an inspector under the statute, purchased of Hopkins a portion of the butter which, when analysed, turned out to have 23 per cent. of water in it. Thereupon the inspector took proceedings against Hopkins for having sold adulterated butter, but upon Hopkins proving that he bought the butter upon a written warranty, the proceedings against him were dismissed. The inspector thereupon proceeded against the appellant for having given a false warranty in writing in reference to an article of food sold by him. The appellant proved that he had himself bought the butter upon a written warranty like that which he had himself given, and the magistrates found as a fact that when he sold it he had no reason to think that the butter was of other quality than that which had been warranted. The justices, however, thought that the proof of warranty would have been an answer to proceedings at the instance of a purchaser, yet it was no answer to a proceeding like the present, and the question which was

raised upon that appeal was whether the justices were right in convicting the appellant.

Mr. Justice Hawkins, upon the conclusion of a long argument, said that the question which they had to determine was, whether the appellant had been rightly convicted under the 27th section of the Sale of Food and Drugs Act, 1875, of having given a false warranty as to the quality of the butter sold. The statute said that every person who gave a false warranty should be guilty of an offence and liable to a penalty of £20; and the question was what was the construction to be put upon those words. Could a man be convicted of having given a false warranty, when he honestly believed, and upon reasonable grounds, that it was true, or could he be convicted only when he knew the warranty to be false? He had come to the conclusion that a man could not be convicted of this offence, unless he knew that the warranty was false; and therefore that the conviction should be quashed with costs.

Appeal allowed.

IS SOAP A DRUG?

IN the Queen's Bench Division, on May 7, before Mr. Justice Hawkins and Mr. Justice Wright, the case of *Houghton v. Taplin* was heard. It was an appeal from a decision of Surrey magistrates, under the Sale of Food and Drugs Act, in reference to the sale of what was called "Arsenical Soap."

Mr. Alexander Glen was for the appellant, and Mr. Lawless for the respondent.

Mr. Glen said that he appeared for the appellant, who was an inspector appointed by the Surrey magistrates, and he sent his assistant to purchase arsenical soap from the respondent, and that person received soap which contained no arsenic. The seller was summoned for having sold an article which was other than that demanded by the purchaser, and the question was raised whether any offence had been committed under the Sale of Food and Drugs Act, or, in other words, whether the article sold was or was not a drug. The magistrates came to the conclusion that arsenical soap was a drug within the meaning of the statute; but as the soap sold contained no arsenic, it was not a drug, and therefore they refused to convict the respondent. It was this decision which was appealed against, and the question now raised was whether the justices had arrived at a correct conclusion.

Mr. Lawless appeared to support the decision of the justices.

Mr. Justice Hawkins: The whole question seemed to be whether soap was a drug.

Mr. Lawless: And that was a question upon which justices all over the country were differing, and, therefore, it was desirable that there should be a decision of a superior Court upon the matter.

Mr. Glen submitted that soap itself was not a drug, though when mixed with arsenic it had been held to be a drug.

Mr. Justice Hawkins thought that the magistrates had come to a right decision.

The appeal was dismissed with costs.

POISON IN CHEESE.

THE Medical Officer of Health for Manchester has reported the occurrence of a case of poisoning by cheese with fatal results. The cheese was consumed by a number of persons, and in many of them gave rise to severe pains in the bowels and diarrhoea, with occasional vomiting. Professor Delépine, of Owens College, examined the cheese, and found it to be fatal to mice and guinea-pigs fed on it. He was able to isolate a bacillus from the animals, which was proved to be the cause of the illness experienced on eating the cheese. The rest of the cheese, weighing 30lb., was seized by the sanitary authorities.

ANISEED ADULTERATION.

THE Berlin correspondent of the *Daily News* says it has become known there that three bales of aniseed received at Rotterdam from Bari, on examination by the Board of Health at The Hague, revealed the presence of 10 per cent. of hemlock fruits. The sale of the adulterated aniseed was forbidden in Holland, but it was sent from Rotterdam to Germany, and efforts to trace it since have so far failed.

MARGARINE.

At Hitchin, on May 4, Charles Edwin French, grocer, Hitchin, was charged with selling butter adulterated with 70 per cent. of margarine; he was also charged with selling margarine which was not wrapped in paper having the word "Margarine" printed thereon in letters not less than a quarter of an inch square.

Mr. Thomas Johnson, inspector of Food and Drugs Act to the Herts County Council, said that on April 6 he sent his assistant, Michael Hynes, into the defendant's shop in Walsworth-road, Hitchin. Hynes soon after came out with a parcel which he handed to him, and he went himself into the shop. There he saw the defendant's son, whom he told that the butter had been bought for analysis. He divided the butter into three portions as required by the Act. Young Mr. French said the butter was a mixture, and Mr. French, who came into the shop about the same time, said the apprentice, who brought it up from the cellar had made a mistake; and he sent the young man down for the tub from which the butter had been taken. That tub was marked "Margarine." Witness asked Mr. French for the tub from which it ought to have been taken, but it was not produced. The certificate of Mr. A. E. Ekins, St. Albans, the county analyst, showed that the butter sold contained 70 per cent. of margarine and 30 per cent. of butter.

Cross-examined: He had bought a sample of shilling butter at Mr. French's some time before, which, on analysis, was found to be genuine.

Michael Hynes, the inspector's assistant, said that on going into the defendant's shop he asked among other things for "half a pound of tenpenny butter." Young Mr. French called to some one to bring up half a pound of tenpenny butter and then went to serve another customer. A young man brought the butter to the counter, weighed it and handed it to him. It was not labelled "Margarine." He went to the door and handed it over to Mr. Johnson. It was not until Mr. Johnson had divided the butter into three parts that young Mr. French said it was a mixture.

Mr. Johnson submitted that this was a case in which margarine had been deliberately foisted on a customer instead of butter. Young Mr. French knew that it was margarine that was being sold; if he had said, "We have no tenpenny butter," then the assistant's instructions were to ask for butter of the next highest price, a shilling or fourteence, or whatever it might be. He would remind the magistrates that the Margarine Act was passed for the purpose of preventing the public being imposed upon by the sale of a mixture instead of genuine butter; and he thought they would be justified in inflicting such a penalty on the defendant as would deter others from doing as he had done.

Mr. French said the whole matter arose out of a mistake on the part of an apprentice. There was plenty of American butter, for which they charged 10d. a pound, in the cellar, and it was half-a-pound of this butter which his son asked to have brought up, but this stupid apprentice went to the wrong tub. His son was called away just at that time to serve another customer, and so could not give personal attention to the matter. He had been in business 20 years as a grocer at St. Albans, and had never been charged with any violation

of the law. He had only been in business in Hitchin a short time, and a conviction would almost ruin him, though the cause of complaint was merely the result of the carelessness of an apprentice, who had been repeatedly told that he must not sell margarine without a label.

The Magistrates fined the defendant £1 and costs (these to include 15s., the cost of analysis), in the charge under the Food and Drugs Act, and 10s. including costs for the breach of the Margarine Act.

The Chairman observed that the defendant was liable for whatever his assistants did in his shop.

At the Birkdale Police Court on May 6, William Moon, grocer, Banks, was charged with selling butter adulterated with foreign fats. W. J. Parkinson, an inspector of the Royal Agricultural Society and the Lancashire County Council, said that on the 8th ult. he called at defendant's shop and purchased from Mrs. Moon three-quarters of a pound of butter, for which he paid 10d. On analysis it was found to contain 11 per cent. of water and 65 per cent. of foreign fats. Mrs. Moon told him they had purchased it from Mrs. Marsh, of Plungington-road, Preston, as pure butter.—Cross-examined by Mr. Cook, who defended, he said he should not think the defendant would pay 11d. a pound for this stuff if he wished to commit a fraud, when he could get it for 5½d. or 6d. a pound. The defence was that the butter was sold in the condition it was received, and that the price paid was 11d. per lb. Mrs. Marsh was the wife of a retail dealer in Preston, and also did a little in the wholesale way among village shopkeepers. They had never paid less than 10d. per lb. for butter. Defendant had been a shopkeeper for 13 years; he had never been summoned before, and he never got an invoice for the butter because it was always paid for at the time.—The defendant was fined 2s. 6d. and costs, and advised to proceed against the dealer.—Henry Jackson, Banks, was summoned for a similar offence on the 8th ult., the adulteration in this case being to the extent of 15 per cent. of foreign fats.—Mrs. Jackson appeared for her husband, and said she had been in business for 18 years, and bought this butter from Mr. J. Wright, Birkdale, as pure butter, and paid 11½d. per lb. for it. She put in a letter from Mr. Wright stating that it was invoiced to him as pure butter.—Mr. Parkinson said she had her remedy against Mr. Wright, and he had his from the wholesale dealer. She was fined 2s. 6d. and costs.

ADULTERATION IN ST. GILES.

At Bow Street, on May 5, Mr. Vaughan heard summonses against dairymen and shopkeepers for selling adulterated milk and butter. The summonses were taken out by Mr. H. C. Jones, Clerk of the St. Giles' Board of Works, and the cases were proved by Sanitary Inspector Bond and his assistants. Luigi Cossavella, a restaurant keeper, of Tottenham-court-road, was charged with selling adulterated milk.—Mr. Ricketts defended.—It appeared that Inspector Bond purchased a glass of milk at defendant's establishment for twopence. When analysed the milk was found to contain 9 per cent. of added water, and was deficient of 30 per cent. of its natural fat.—Mr. Ricketts said the defendant had carried on business for eleven years without complaint. The milk he sold to the inspector was intended to be used in tea, coffee, etc., and it was seldom he sold any in a glass. Moreover, the defendant was a foreigner, and therefore ignorant.—Mr. Vaughan: I do not agree with you. Foreigners who carry on business in this country are generally astute and wideawake people. (Laughter.)—Defendant was fined 20s. and costs for the added water, and 40s. and costs for the missing cream.—Charles Warner, of 18, New Compton-street, was fined £5 and 6s. costs for selling diluted

milk, and "butter" which was really margarine without placing it in the printed wrapper enjoined by the Act.—Alfred Henry Tew, of Shaftesbury-avenue, was summoned for similar offences.—It appeared that the inspector's assistant had obtained from defendant's shop milk from which 8 per cent. of fat had been extracted, and butter (which should have been labelled "margarine") containing 70 per cent. of foreign fat.—Mr. Ricketts contended that this was all owing to a young lady visitor who was left in temporary charge of the shop.—Mr. Vaughan ordered payment of fines and costs amounting to £1 16s.—Mrs. Sophia Morgan, of Shaftesbury-avenue, was similarly summoned.—Mr. Tonkins, solicitor, appeared on her behalf, and said the defendant had only just taken the shop, and there was a certain amount of confusion. He called evidence to show that the Sanitary Inspector's agent asked for two ounces of cheap butter, that he was told he could only have margarine, and that he said he was perfectly satisfied. It was further contended that the basket from which he was served was marked "margarine."—Mr. Vaughan convicted the defendant, and ordered her to pay fines and costs amounting to £3 6s.

BUTTER.

At Cheshunt, on May 5, James Moore, of Waltham Cross, appeared in answer to two summonses, one charging him with selling as butter a substance containing margarine; and the other with selling margarine without placing it upon a printed wrapper plainly marked "margarine."—Mr. J. Avery defended. Mr. Johnson, Inspector under the Foods and Drugs Act, deposed that on March 29 he went to defendant's shop. Mrs. Moore, who was in charge, said, in answer to a question, that she had some butter which she would sell at 1s. per pound. Witness bought a pound, and then told Mrs. Moore that the stuff would be analysed. The analyst's (Mr. A. E. Ekins, St. Albans) certificate showed that the stuff was a mixture of margarine and butter. The paper in which Mrs. Moore had wrapped the mixture was a plain piece.—Mr. Avery contended that the second summons could only apply in a case where margarine was asked for and sold. According to instructions, there was bitterness between Mr. Johnson and Mr. Moore.—In answer to Mr. Avery, Mr. Johnson said he paid 1s. for the mixture. Shortly afterwards Mr. Moore wrote stating that the price was 1s. 2d., and asking for the other twopence. (Laughter.) Witness sent him two stamps. (Renewed laughter.)—Defendant deposed the mixture was invoiced as "butter," but not warranted as such. He thought he was selling butter. Mrs. Moore was to ill to attend.—The agent for Mr. J. W. Chesshull, of Wood Green (who had supplied the mixture to defendant) stated that defendant never ordered margarine. The only way in which he could explain the presence of margarine in defendant's shop was that it must have been supplied to him instead of the butter he had ordered.—The Bench considered that the invoice (produced) was sufficient evidence that defendant did not use a marked wrapper, because he thought he was selling butter. But in the other case the invoice was not sufficient evidence, though a warranty might have been. There had probably been a mistake, but defendant was legally liable, and they must fine him 10s. and costs.—William Frogley, of Hoddesdon, was summoned for selling milk with 20 per cent. of fat extracted.—Mr. J. Avery appeared for the defence.—The Inspector informed the Bench that on April 2 he saw one of defendant's employees delivering milk near the Brewery, Hoddesdon. Witness asked for a pint of new milk, and defendant's servant sold him a pint of milk for 2d. The analysis showed that the percentage of fat mentioned in the summons had been abstracted.—Mr. Avery made a technical objection to the wording of the

analyst's certificate.—The Justices said it was quite sufficient for them that the certificate showed the milk to be below the standard.—A fine of 10s. and costs (including the cost of analysis) must be paid.

A WARRANTY QUESTION.

At Bingley, on May 5, Stephen Thomas Sharp, grocer, Micklethwaite, was summoned at the instance of Mr. A. Randerson, inspector under the Food and Drugs Act, for selling adulterated syrup of rhubarb. Mr. H. Hankinson, from the West Riding solicitor's offices, Wakefield, prosecuted, and Mr. Percy Naylor defended on behalf of Messrs. G. L. Greenwood and Co., wholesale druggists, Keighley. The fact that the syrup contained an excess of water amounting to 23 per cent. was not disputed, the question at issue being whether the shopkeeper was protected by a guarantee given by the wholesale dealer. The order for the drug and other articles was given in 1896, by the defendant's wife, to the traveller of Messrs. G. L. Greenwood and Co., and the goods, together with the invoice, were delivered in the usual course. Opposite the item in the invoice for the syrup of rhubarb the words "guaranteed genuine" were written. Mr. Naylor contended that this was an absolute guarantee, and protected the defendant, but Mr. Hankinson contended that the warranty must be obtained at the time of the contract for sale. Mr. Naylor replied that the contract of sale was not completed until the goods were delivered.—The Bench, after a consultation, decided that the defendant bought the syrup of rhubarb upon a written contract, and sold it as he bought it, and therefore they dismissed the case. In reply to Mr. Hankinson, the Chairman said the Bench would have no objections to stating a case if desired.

MEAT.

At Grimsby, on May 7, William Gibson, wholesale butcher, of 44, East-gate, was charged with having in his possession for the purposes of exhibiting for sale, meat unfit for human food, on March 9.

The magistrates adjudicating in this case were Messrs. S. Oates and J. M. Dennis, others having retired as being members of the Corporation, the prosecutors.

Mr. T. Mountain appeared on behalf of the Sanitary Authority, and Mr. Willyams, of Lincoln, represented the defendant, who did not appear.

Mr. T. Mountain, in his opening statement, went over the details of the case at some length, and intimated that the defence would not dispute the unsoundness of the meat, but contend that it was not intended for human food. He pointed out, however, that defendant had no right to slaughter an animal intended for dogs' meat in a licensed slaughter-house.

Mr. H. F. Moody, Borough Sanitary Inspector, stated that on the afternoon of Tuesday, March 9, he proceeded to the door of the yard in which the defendant's slaughter-house was situated. When he got to the yard door, looking towards the slaughter-house, he saw a man—who afterwards turned out to have been assisting in the slaughter-house—standing against the door of the slaughter-house. As soon as this man saw witness, he disappeared quickly into the slaughter-house. Witness then hurried down the yard, and when he got in the slaughter-house, found a carcase of beef hanging up by both its haunches in the usual way. Simpson, a man employed by defendant, was just picking up a cleaver to strike the carcase. The hide was off, lying in the yard. The carcase had been severed half-way, straight down the spine, about as far as the fore-quarter. The usual way would have been to continue that severing so as to divide

the carcase into two halves. Both men, Simpson and the other, were dreadfully excited. Simpson said in a very hurried way, as he struck the carcase across the head, "We're not dressing this for food. Gaffer said if it was amiss I was to down it, and I am doing it you see." He kept on striking the carcase just anywhere, and repeated, "It is not for food, we have only pulled it up to get the hide off. I fetched it from Brooks, of Irby." Further questioned, Simpson said the animal did not walk, as it was lamed in its right shoulder. The meat, so far as the muscle went, was in very good flesh, but it was suffering from general tuberculosis. The diaphragm had tubercles all over it, also the peritoneum. The lungs and liver also had evidences of tuberculosis. The meat was quite unfit for human food. The meat was taken in the usual way before Dr. Newby and a Justice of the Peace, and condemned. Witness had weighed the beef in company with his assistant, and the weight was 51 stones 5lbs. Mr. Gibson was away coursing at the time witness first saw the carcase, and witness had made several attempts to see him since, but without success. Witness had no doubt, he said, in reply to Mr. Mountain, that the signs of tuberculosis on this carcase could have been dressed away, and its condition could not afterwards have been detected by the public. If the animal had broken its shoulder, that alone would not have made the meat unfit for human food. He had never known of a carcase intended for dog's meat to be slaughtered in a licensed slaughter-house. Animals intended for dogs' meat in Grimsby were usually handed over to a man at Laceby.

Cross-examined, witness said there was no knackers' places in Grimsby where diseased beasts could be slaughtered.

Mr. J. W. Shaw also gave evidence of the weighing of the beef.

Dr. F. Newby, Medical Officer of Health for the Borough, said he had inspected the beef and found it undoubtedly unfit for human food. In his opinion it would be a dangerous thing to slaughter such an animal in a licensed house, there would be danger from contamination from the knives.

Cross-examined, he said that would not be known to the unprofessional.

Mr. J. H. Loft, M.R.C.V.S., gave similar evidence, emphasising the fact that good carcasses would be in great danger of being contaminated when such a beast as the one in question was slaughtered in a licensed slaughter-house.

In cross-examination, Mr. Loft said there was a place in Cleethorpe-road where such beasts could be slaughtered.

Mr. Willyams, in a lengthy speech for the defence, said he should show that Mr. Gibson never intended this beast for human food. He did not know it was diseased until it had been slaughtered. As for the danger of contamination, that was known to Dr. Newby and the profession, but not to the uninitiated. It certainly was not known to the authorities of Grimsby, because if they did know it, it would be their duty to the public to provide a place where diseased animals could be slaughtered.

Mr. William Brooks, farmer, of Irby, was first called, and spoke to giving a beast to Mr. Gibson for dog's meat. The beast had broken its shoulder, and was wasting. Mr. Gibson had been to see the beast to find whether it was worth anything, and said it was worth nothing.

George William Barnes, accountant, of Grimsby, said that on March 9, about 4 p.m., he arranged to buy from Mr. Gibson some meat for his dog, Mr. Gibson having told him that he was having a beast for dogs' meat.

George Simpson, slaughterman to the defendant, said he had fetched the beast in question from Mr. Brooks', at Laceby. Mr. Gibson instructed him to cut the beast

down, take its hide off, and throw it outside. The beast's shoulder was injured, otherwise it looked in good condition. Mr. Gibson had five dogs. Witness took the skin off the beef roughly, not carefully. The beast was being lowered down when Mr. Moody came into the slaughter-house. The floor was all blood and muck, and they would not have lowered a good beast with the skin off on to it. Witness denied altogether that he was nervous or flurried when Mr. Moody came in, and neither him nor Howard, the other man, altered their movements because Mr. Moody came in. Witness had not slaughtered any other beasts for dogs' meat in Mr. Gibson's slaughter-house. Witness was not surprised, and did not think it a pity that such a good beast should go for dogs' meat.

Alfred Howard made a similar statement. When Mr. Moody came up he had just taken some muck out, and returned in the ordinary way.

Joseph Chester, a butcher, supported these statements.

After the Magistrates had retired for consideration, Mr. Oates said they were of opinion that the case was proved against the defendant, and he would be fined £10 and costs. They were also of opinion that the authorities should get a public slaughter-house for such cases, so that ordinary licensed premises need not be used for slaughtering dog meat.

SPIRITS.

AT North London, on May 8, Charles Phillips, licensed victualler, was summoned by the Islington Vestry for selling whiskey 6:3 below the standard of strength as allowed by law. Mr. White, who prosecuted, called evidence to prove that a pint of Scotch whisky was purchased by Miss Penelope Clarke at defendant's house. For this she paid 2s. 4d., and then handed it to Sanitary Inspector Ward for conveyance to the public analyst. This certificate showed 31:3 of dilution instead of 25:3 as allowed by law. Mr. D'Eyncourt showed his knowledge of the law by asking how whiskey came within the definition of "food" or "drugs." Mr. White: The definition of "food" is a wide one—"any article used for the food or drink of man." Mr. Young, for the defence, produced two or three notices posted in the defendant's bar which declared that all spirits were diluted; and, further, said they were diluted according to price. The defendant, however, blamed his hydrometer, which he said had played him false when breaking down the cask of whiskey in question. Before he knew the result of this analysis, he had his hydrometer tested, and discovered it was wrong. Mr. D'Eyncourt said the hydrometer was favourable to the defendant. He would take it that this was the only cask that had come under the operations of this particular hydrometer, and fine him only £5 and 12s. 6d. costs.

VINEGAR.

AT Cardiff, on May 4, Mr. Beynon Harris, prosecuting on behalf of the police, said there are two varieties of "vinegar" used for common consumption. The first is a genuine vinegar produced from alcohol, which is converted by fermentation into acetic acid. The second is very simply made. To ninety parts of water three-parts of wood-acetic acid are added, and the whole coloured with two parts of colouring matter which gives it the appearance of the best fermented vinegar.

The Birmingham recorder, in deciding an appeal, laid it down that vinegar and a preparation of acetic acid and water were not one and the same thing, and in law could not be accepted as the same.

Mr. Harris told the court that the latter was exten-

sively sold under the name of vinegar, and, to make the delusion the more complete, generally at the same price, and so the public were deceived in that they did not get what they asked for and expected for their money. It was almost, if not wholly, impossible to detect any difference in taste or appearance between the genuine malt vinegar and the spurious liquid.

Mr. Beynon Harris mentioned the fact that the relative cost of production is as 1½d. to 6d. per gallon, and the public should, therefore, be protected against the inferior article.

The acetic acid used in the manufacture of the vinegar is produced by the process of distillation from ordinary wood, and Mr. Vachell, barrister, of Bristol, who appeared for two of the defendants, was obliged to admit that, unless the coloured acid was specifically sold as "Distilled wood vinegar," sellers were liable to conviction.

Mr. Beynon Harris contended that as it was not vinegar it was even illegal to sell it by using the name "vinegar," whether it was called "Distilled Wood Vinegar" or not, but the stipendiary ruled that point against him.

In the first case, that of George Brown, Mr. Vachell defended, and a conflict of testimony occurred between Officer David and the defendant's wife, who sold it. The wholesale firm supplied labels to hang upon the casks so that all might see, and further supplied beautiful green and white circular labels to gum on, inscribed "Distilled Wood Vinegar, guaranteed pure, and manufactured by Woolway, Coleridge, and Co., the City Vinegar Works."

The officer declared these were not shown him when he asked for "vinegar," and the lady said they were. She got the benefit of the doubt in the stipendiary's mind.

Alfred Niblett did not fare so well. He was fined £3 and costs or a month's imprisonment. He did not satisfy the bench that the distinguishing labels were made clear to the purchaser.

Mrs. Floyd paid £1 and costs; Thomas Hewings, £2 and costs; Henry Price was cautioned; Sarah Anne Hughes was fined £3 and costs; Cecilia Grady, £3 and costs; and Robert Grittle, £1 and costs. Their vinegars, the product of various firms, their offence was the same—omitting to inform the purchaser that the vinegar was not "malt vinegar." The cases against the rest were either withdrawn or dismissed.

LIME JUICE AND GLYCERINE.

At the Brentford Police-court, last week, Mr. James Wilkie Webber, chemist, High-road, Chiswick, appeared for the third time to a summons which alleged that he had sold to the inspector under the Food and Drugs Act for Middlesex, a preparation of "Lime Juice and Glycerine Hair Cream" which did not contain any glycerine.

Mr. Montagu Sharpe, the Chairman of the Bench, remarked that the case had reached an extraordinary stage. The county analyst had issued a certificate setting forth that the preparation did not contain any glycerine. Then the defendant appealed to Somerset House, and the analyst there had certified that the preparation did contain glycerine. It was, therefore, necessary that both the analysts should be placed in the witness-box and cross-examined on their certificates. Four analysts now gave their opinion. Mr. Montagu Sharpe said the Bench were of opinion that the case against Mr. Webber had failed, and the summons would be dismissed. The Bench were also of opinion that the glycerine, being a heavy substance, was contained in the lower strata of the preparation, with the result that the portion sent to the county analyst did not contain any glycerine, whereas that sent to Somerset House did. No costs would be allowed on either side.

MYSTERIOUS DEATH OF A GIRL AT BURNLEY.

SARDINES SUSPECTED.

AN inquest was opened at Burnley, on May 7, on the body of Grace Holgate, daughter of Mr. Albert Holgate, butcher, St. James-street, the coroner stating that the girl had felt ill after eating sardines, and it would be for the jury to say whether or not there was something wrong with the sardines or the tinning.—Mr. Holgate said his daughter had always been a strong healthy girl up to Easter Tuesday. She was in her eighteenth year. On that day she had a walk along with her mother, and for tea sardines were among the things partaken of. Later in the evening his daughter complained of feeling ill, and as she was still ailing next morning a doctor was sent for. She grew worse, and died on Monday night. Another girl partook of the sardines, but she was sick and afterwards all right. Another doctor was afterwards called in, and he believed death to be due to irritant poisoning.—The inquest was adjourned, a post-mortem examination being ordered.

"ARSENICAL" SOAP.

At the Kingston-on-Thames County Court on May 8, before judge Lushington, Q.C., an action, occupying several hours, was heard, in which Mr. A. Higgs, J.P., chemist and druggist, Kingston, sought to obtain £50 as damages from Messrs. Yardley and Co., toilet soap manufacturers, Tottenham Court-road, London, for fraudulently selling him an article purporting to be arsenical soap, and for retailing which the plaintiff was fined 10s.—The plaintiff stated that he purchased the soap from the defendants through their traveller, who assured him that it was genuine arsenical soap. On analysis not a grain of arsenic was found in the soap, and since the conviction against him there had been a substantial falling off in his business receipts.—Mr. Spokes, for the defence, stated that no soap contained arsenic, and the term "arsenical" was a fancy name, just as "sunlight" and other names given to soaps. The defendants' travellers were instructed to inform purchasers of the soap that it contained no arsenic.—Several travellers of the firm bore out this statement.—His honour held that the police-court proceedings against the plaintiff were right and proper, and that defendants were liable for damages. Judgment was given for £32.

LEICESTERSHIRE COUNTY COUNCIL AND ADULTERATION.

THE Chief Constable of the County, Mr. E. Holmes, states that during the quarter 86 samples of food and drugs had been collected and submitted for analysis. These included 28 brandy, 28 milk, 22 olive oil, 6 oatmeal, and 2 butter. Of these, five samples of brandy and one sample of olive oil were certified to be adulterated. With respect to the sample of olive oil, certified by Dr. Dyer to have been adulterated with 20 per cent. of cotton seed oil, the portion of the sample left with the vendor was certified by the analyst employed by him to be perfectly pure, whilst that portion of the same sample kept by the inspector was certified by Somerset House to be free from cotton seed oil, but to contain 20 per cent. of sesame oil. Before the Magistrates, Dr. Dyer not only attended in person in support of his certificate, but called Mr. Otto Hehner, Mr. Bevan, and Mr. Cassal, all of whom had no hesitation in absolutely confirming his certificate. Under the circumstances the Chairman said that though they should not inflict a penalty they had no doubt that the sample was adulterated with cotton seed oil.—The report of the county analyst stated that he had analysed, during the past quarter,

86 samples of food, viz.:—2 samples of butter, 28 of brandy, 28 of milk, 6 of oatmeal, and 22 of olive oil. With regard to the milk samples, he mentioned that out of the 28 there were only two cases in which the non-fatty solids were as low as the limit of 8·5 per cent adopted by public analysts, and only in one case did the fat fall as low as 3 per cent., the limit adopted as the minimum for fat in genuine milk. The average of all the 28 analyses showed:—Non-fatty solids, 9·03 per cent.; fat, 3·50 per cent. During the preceding quarter he also analysed 28 samples of milk, which averaged as follows: Non-fatty solids, 9·03 per cent.; fat, 3·87 per cent. Of the brandy samples, five were adulterated in the sense of being watered down to a strength below the legal limit fixed by Parliament. Of the 22 samples of olive oil it was satisfactory to find that 21 consisted of pure olive oil. One sample, however, was adulterated to the extent of 20 per cent. with cotton seed oil. The vendor of this adulterated oil was prosecuted, but the wholesale house of whom he had bought it produced a letter from a gentleman in Liverpool who had analysed some of the same oil and found it to be pure. The analysts at Somerset House, however, agreed with him as to there being at least 20 per cent. of adulteration. The Bench decided that his analysis was correct, although they abstained, in view of technical objections raised on behalf of the defendant, from inflicting any penalty.

MILK—AND HOW TO SELL IT.

(Continued from page 226.)

SOME want quality, some want quantity, so among them all the dairyman has a difficult task before him every day of the week. I therefore say that the dairyman, to a large extent, should be left to himself in the same way as other tradesmen and merchants. If his customers are not satisfied, then they must go elsewhere, or keep a cow of their own. The whole thing seems to me to be in a nut-shell, if we could only agree as to one uniform standard of sweet milk, and a uniform price for that. But if this is impossible, then let us agree to sell according to quality to suit the wants of all comers. The legal standard must of necessity be an average one, and a low average for the dairyman to sell by, when it fixes a minimum below which a penalty will be incurred; but this is not to hinder each individual dairyman from saying to his farmers—I will give you so and so extra per gallon for all milk containing 3 to 4 per cent. of fat. If a dairyman, then, has milk to sell which he can rely upon as constantly above the Government standard, it will have cost him more, and that extra cost must be paid for by the consumer, and the sooner the public and the Government understand this the better for all parties.

It would be better that the dairyman should openly educate his customers than that he should require to manipulate the milk for the wants of the people, knowing, at the same time, that he is defrauding them according to law, and running the risk of prosecution and exposure for doing that which the public themselves demand. As it stands at the present time, the dairyman is often in a serious dilemma. The authorities exercise their pressure for quality, irrespective of price, according to a supposed standard of 2·75 percent. of fat, and 8·50 per cent. of solids not fat, and the general public, for quantity, irrespective of either. Let them do so by all means if they wish it, but let the dairyman have the same liberty that all other tradesmen and merchants have, or as near it as practicable, of classification and of price, and not be made the slave of one solitary standard, which may compel him either to lose money or technically commit a crime.

I would propose that milk should be graded something like the following:—

| | Sweet Milk. | Partially Skim Milk. | Skim Milk |
|----------------|-------------|-------------------------|-----------|
| | per cent. | per cent. | per cent. |
| Fat ... | 3·75 | 2·50 | 1·00 |
| Caseine ... | 3·79 | 4·04 | 3·81 |
| Milk sugar ... | 3·84 | 3·24 | 4·01 |
| Albumen ... | 0·54 | 0·36 | 0·49 |
| Mineral matter | 0·75 | 0·78 | 0·83 |
| Water ... | 87·33 | 89·08 | 89·86 |
| | 100·00 | 100·00 | 100·00 |

It may be said that, although a standard is fixed, and sweet milk is defined in customary terms, yet there is no law regulating price. Every dairyman is free—so far as the law is concerned—to charge what he likes. That is, of course, quite true; but it is equally true that the public will buy in what they consider the cheapest market. This being so, every law or custom which interferes with a trader or merchant in classifying his commodities, so as honestly to adjust the commercial to the intrinsic value, is an incentive to trickery, dishonesty, and unlawful practices. The right thing, and the only thing under the circumstances, is for the dairyman to sell his milk and cream as he sells his butter, cheese, eggs, &c., according to quality. If the public want quality, and are willing to pay for it, let them have it by all means, but insist upon your price as sensible men, with a fair working profit, and you may rest assured you will keep your customers against all opposition. But where quantity is wanted, let the public distinctly understand that they cannot have quality and quantity at the same price.

The public can have what is called Dunlop and Cheddar cheese from 5d. to 10d. per lb.; Stilton cheese from 1s. to 2s. per lb.; smoked ham from 6d. to 1s. 2d. per lb.; tea from 10d. to 3s. per lb.; and butter from 1s. to 1s. 6d. per lb.; and so on with many other articles according to quality. The law is intended and expected to protect every honest tradesman; all its provisions aim or ought to aim at preventing fraud, from selling anything which is not of the nature, substance, and quality of that for which it is sold. It is in the interest of the public and the dairyman that the people should be educated to recognise the differences in the qualities of milk and cream as in other articles of daily consumption. Then, again, the public can have (what is called) cream containing from 12 per cent. of fat to cream containing about 50 per cent. of fat, and these are sold at so much per gill, according to quality; but it would never pay to sell the latter at the same price as the former, yet there are some people, not in the dairy trade, of course, who cannot understand this.

(To be continued.)

ADULTERATION IN BRISTOL.

THE Public Analyst reports to the Town Council that in the quarter ending March 31, he analysed seventeen samples of food, and found two of them adulterated—milk watered.

RADNORSHIRE AND SALE OF FOOD AND DRUGS ACTS.

THE Radnorshire C.C. have received a letter from the Local Government Board, referring to the annual report of the County Analyst, and expressing regret that, notwithstanding their letter of Jan. 18, 1893, only four samples had been taken under the Sale of Food and Drugs Acts in the last three years, and in ten years, 1887-96, only twenty samples, which were quite insufficient to form a fair judgment of the working of the Act. The matter has been referred to the General Purposes Committee for consideration and report.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, MAY 22ND, 1897.

THE AMERICAN OIL GANG THROTTLED AT LAST.

EVERY independent, honest investigator who has examined the question has felt ashamed of certain English men of science who have allied themselves to the gang of murderers and thieves who secured the 73 deg. F. flashpoint for the benefit of the owners of refuse American oils, the sale of which is prohibited in the United States. For years in this journal we have

exposed the infamy, and our excellent contemporary, *The Chemical Trade Journal*, has times over shown the tainted nature of the scientific bought evidence adduced before select committees to bolster up the nefarious schemes of the very foulest of hypocrites and contrivers of arson and murder unhung. Men who knew the facts asked themselves how it was that the daily papers had nothing to say upon a question involving the roasting alive of one person per day in the United Kingdom, and the loss of enormous sums of money by fires. Surely the righting of this hellish wrong was work worthy of the greatest of our mighty newspapers! There are few, alas! patriotic enough, humane enough, or honest enough, to attack monopolies in which even ex-prime ministers have interests, and whose emissaries are everywhere at their foul work of lying. Even now, Parliament has the American gang's hirelings burking awkward questions, houcussing committees, and doing that kind of dirty work which only some gentlemen who are M.P.'s can be found to do. *The Star* has done many public services in exposing knavery—Miller and Douglas Hungerford to wit—but it never embarked, for it could not, upon a worthier mission than the one it began on May 17 in its exposure of the oil trust. It is, after all, but little that journals like ours, or *The Chemical Trade Journal*, can do to interest the mass of the people in any question, however pressing and grave it may be. We can only hope that by writing the truth we may interest journals which can influence more directly public opinion, and we have to offer our hearty congratulations to *The Star* for being the first and the only daily paper which in the whole of the United Kingdom has taken the trouble to personally investigate the most villainous conspiracy that ever existed, and having discovered that murder for gain is the motto of the American oil gang of conspirators, our contemporary apparently has determined to naught extenuate whilst setting down naught in malice. Journalism like this of *The Star*, in its dissection of the oil gang, is journalism of real public usefulness; it is the protection of the ignorant from canting hypocrites, murderers and dynamitards, whose millions can bribe judges and juries and save them from what even they would desecrate—the gallows; for they have murdered thousands, not in racial war, not for the mad glory of a Napoleon, but for sordid pelf. They have planned and bribed to amass their millions, well knowing that every dollar stank with the blood of their fellow human beings, and with these crimes debited to them they hold prayer meetings on Wednesdays followed by planning of dynamite explosions in some obnoxious competitor's works. In unmasking these devils *The Star* has our heartiest good wishes.

KEPHIR: A FERMENTED BEVERAGE PREPARED FROM COW'S MILK.

By C. D. SPIVAK, M.D. (*Assistant in Medicine, and Lecturer on Diseases of the Stomach and Intestines in the Medical Department, University of Denver*).

THAT cow's milk in its natural state is not in all cases an ideal food, as it is sometimes erroneously called, is a fact too well known to every practising physician. On account of the ruminating habit of the animal, the bovine stomach is able to deal with large masses, and therefore hard, tough curds are formed when the milk comes in contact with the acid and curd-forming ferments of the gastric juice. Woman's milk, on the other hand, forms soft, fine curds. This is one of the chief reasons why cow's milk disagrees with infants when given in an undiluted state. In adults, too, the large curds formed are retained for a long while, the digestion of milk being imperfect. From the presence of microbes in abundance fermentation of lactose and

decomposition of caseine take place, resulting in that very disagreeable condition termed biliousness, which is really not a disturbance of the liver, but a morbid condition of the stomach. Hence, the instinct of both savage and civilised people prompted an artificial improvement in the natural article, by means of various methods with which all medical men are more or less acquainted.

I wish to consider in this paper a method of improvement that is not as well known in the United States as it should be.

The fact that the preparation of which I shall speak is used extensively in Russia, Germany, France, Italy and Holland, that it has been used and lauded by such men of eminence as Eichorst, Hayem, Dejardin-Beaumont, Monti, and others, that there exist concerning it a voluminous literature, considering the short time it has been in use, would seem to justify this publication.

THE DISCOVERY OF KEPHIR.

In 1866 Djogin reported before the Caucasian Medical Society the fact that the mountaineer Tartars used a refreshing and nutritive article of diet called Kephir, resembling koumiss, but made of cow's instead of mare's milk. In 1877 Shablovski took up the subject anew, and in 1882 Kern published a biologic study of the ferment used. The latter was soon followed by a host of investigators and experimenters in Russia and in Germany, among whom stands pre-eminently Dmitrieff, who elaborated the method of preparation as it is now used, and who applied it as a therapeutic agent on a large scale.

THE ORIGIN OF THE KEPHIR FERMENT.

The mountaineers prepare their Kephir with the aid of a special ferment which is renewed in the same manner brewers and bakers renew their yeast respectively. Whence this ferment was originally derived is unknown. The charm of the mythical has always hovered around it. The Tartars believe it to have come as a sort of manna from Allah. They were not permitted to sell or give it away to strangers, not even to disclose its existence to unbelievers. As a consequence, the Kephir ferment remained for centuries unknown to the civilised world.

THE PHYSICAL PROPERTIES OF KEPHIR FERMENT.

The ferment when dry presents the form of small bodies of a yellowish colour, the size of a pea or walnut, with a surface rough and irregular. They swell easily in milk, increase in bulk, become elastic, tough, somewhat whitish in colour, and resemble then a cauliflower.

THE CHEMICAL CONSTITUENTS OF THE FERMENT.

The dried Kephir bodies, or, as they are universally called, "Kephir Grains," contain, according to Struve:—

| | | | | | |
|---|-----|-----|-----|-----|--------|
| Water | ... | ... | ... | ... | 11'21 |
| Fat | ... | ... | ... | ... | 3'99 |
| Peptones dissolved in water | ... | ... | ... | ... | 10'98 |
| Albuminoids dissolved in ammonia | ... | ... | ... | ... | 10'32 |
| Albuminoids dissolved in Potassic Hydroxide | ... | ... | ... | ... | 30'39 |
| Undissolved residue | ... | ... | ... | ... | 33'11 |
| | | | | | 100'00 |

THE MORPHOLOGY OF THE FERMENT.

The microscope reveals the existence of two fungi closely connected: *Dispora Caucasia* and *Sacharomyces cerevisia*. The field of the microscope presents to the view a fine net made up of the zooglea of the bacteria in the form of bacilli and leptothrix, in the meshes of which are held the cells, *Dispora Caucasia*, of an oval shape and double contour. The name "dispora" is

given to it on account of its peculiar sporulation, which, unlike other forms of bacilli, fructifies at both ends of the vegetative cell. In the fresh grain many of the bacteria can be noticed in the stage of locomotion by means of flagella. The yeast-fungi, *Sacharomyces cerevisia*, possess the peculiarity of multiplying only by fission and do not produce any spores.

Sorokin has found another organism entangled in the meshes of the two organisms already named, *Oidium lactis*, or bacillus acidi lactici.

THE PREPARATION OF KEPHIR.

The Tartars prepare Kephir in the following manner: They fill a leather bag, *burdjuk*, with fresh cow's or goat's milk and throw in some of the Kephir grains. The bag is tightly tied up and is exposed to the rays of the sun. From time to time the bag is shaken up. Every passer by deems it his sacred duty to kick the bag, and the children, as a rule, use it as a ball. In from twenty-four to forty-eight hours, according to the season, the Kephir is ready for use. The bag is emptied and filled anew, the same grains being used over and over again. This is called *Field Kephir*.

The method employed in civilised communities is as follows: The dried grain is steeped in water at a temperature of 30° C. for four or five hours. Having increased three or four times in bulk it rises to the surface. The water is poured off and the grain is washed in distilled water and placed in an earthen or darkened vessel, and boiled milk at a temperature of 20° C. is added to make ten times the bulk of the grain. The mouth of the vessel is covered with several layers of gauze. The vessel is to be shaken every two or three hours. In twenty-four hours the *ferment-generator*, *zakvaska*, is ready. This is decanted through a sieve, is diluted with about ten times its quantity of boiled milk, poured into bottles and hermetically sealed. The bottles are to be kept at a uniform temperature of 15° to 20° C., and regularly shaken every two to three hours. This product is called *Bottled Kephir*. In twenty-four hours it is ready for use, and is called "first day Kephir," in forty-eight hours, "second day Kephir," in seventy-two hours, "third day Kephir," or mild, medium and strong Kephir respectively.

THE FERMENTATION PROCESS.

The theory of Kephir fermentation is far from being elucidated. However, a few attempts at explaining the matter have been made. Milk, as is known, is composed of water, inorganic salts, fat and lactose. The different kinds of milk—human, cow's, mare's, etc., differ only quantitatively, not qualitatively. The fact that the caseine of human milk forms finer curds than that of cow's milk does not depend upon the difference in the qualities of the caseine, but upon the fact that human milk contains more hemi-albumose, which can be seen from the following table:—

| | Caseine. | Albumose. | Hemi-albumose. |
|------------|----------|-----------|----------------|
| Human milk | 49'8 | 25'7 | 24'5 |
| Cow's milk | 87'3 | 8'2 | 4'5 |

The Kephir-ferment, which is composed of three different organisms—a unique phenomenon of cohabitation or comensualism of fungi and bacilli—acts upon milk as follows: The yeast-fungi split one part of the lactose into alcohol, carbon dioxide, glycerine, etc., and another part is formed into lactic acid. The *oidium lactis* coagulates the caseine, but, the action being very slow, the curd is formed, therefore, into small lumps resembling those of human milk. The further action of the lactic acid upon the caseine results in transforming it into hemi-albumose, thus bringing a step nearer to peptone. The *dispora caucasia* probably peptonises the albuminoids, but this is as yet uncertain.

The following tables will serve to elucidate the matter :—

In 100 parts of Kephir

| | 1st Day | 2nd Day | 3rd Day |
|---------------|---------|---------|---------|
| Lactic acid | 0.54 | 0.56 | 9.65 |
| Lactose | 3.75 | 3.22 | 3.09 |
| Caseine | 3.34 | 2.87 | 2.99 |
| Albumin | 0.11 | 0.03 | 0.00 |
| Acid-albumin | 0.09 | 0.10 | 0.25 |
| Hemi-albumose | 0.09 | 0.28 | 0.40 |
| Peptone | 0.03 | 0.04 | 0.08 |

In 100 parts of Albuminoids

| | | | |
|-------------------|-------|-------|-------|
| Caseine | 88.47 | 86.07 | 80.20 |
| Albumin | 3.05 | 0.90 | 0.00 |
| Acid-Albumin | 2.52 | 3.22 | 6.69 |
| Hemi-Albumose | 5.03 | 8.43 | 10.93 |
| Peptone | 0.93 | 1.38 | 2.18 |
| (8) Fat | | 1.75 | 1.70 |
| Alcohol | | 0.80 | 1.00 |
| Carbonic acid gas | | 6.55 | 7.75 |

From the foregoing tables we deduce the following :—

1. Fat, salts and water do not undergo any perceptible changes.
2. The amount of lactose is gradually diminished in the process of kephirisation.
3. Lactic acid is formed and gradually increases in amount.
4. Alcohol is formed and increases in quantity.
5. Carbonic acid is generated.
6. Part of the caseine is transformed into acid-albumin and peptone and hemi-albumose.

PHYSICAL PROPERTIES OF KEPHIR.

When well prepared, Kephir must possess the following properties :—

It should effervesce when the bottle is opened, be of the consistence of cream, have a pleasant sour-sweetish taste, reminding of both cream and seltzer, and be of the odour of sour cream. The curdled caseine should be so fine that it will form a perfect emulsion, the tongue not feeling any lumps. When Kephir is not shaken for any length of time, two layers are formed, liquid above and caseine below, which, however, on gentle shaking should again form a homogeneous mass. Strong Kephir is somewhat more sour to the taste, is thinner, and contains more alcohol and carbonic acid gas.

THE DIETETIC AND THERAPEUTIC VALUE OF KEPHIR.

A food that furnishes the organism with a caseine so finely broken up, and that is comparatively so rich in hemi-albumose, must be a very useful food-stuff, closely resembling human milk. The presence of carbon dioxide and alcohol will act as a stimulant to the mucous membrane of the alimentary canal. The lactic acid adds to the natural quantity of the digestants. It is, therefore, obvious that Kephir is indicated whenever the organism is below par, in conditions of debility, anæmia, scrofulosis, tuberculosis, fevers, convalescence, etc.

Dejardin-Beaumetz and Hayem have reported excellent results from Kephir in cases of carcinoma of the stomach; Lepine, Eichhorst and Weisse in gastric ulcer; Nanu and Mandrowski in cases of anæmia and chlorosis; Jules Simon, Dinitch, Sallet, Monti, Lipski, Taylor, Thompson, and a host of others in all varieties of gastric disorders.

During the last year I have used Kephir quite extensively, and have convinced myself that in all cases of chronic and sub-acute gastritis, and intestinal disorders, Kephir is an ideal food. Especially valuable is the preparation in the dyspepsias of consumptives and in the troublesome cases of tubercular diarrhoea. In all cases where milk even in small quantities was

not tolerated by the stomach, Kephir proved the anchor-sheet. I have never heard a patient complain of weight, belching, and epigastric pressure during the Kephir cure. There was not a single case where Kephir disagreed with the patient, neither did prolonged use develop aversion to it. Every physician dreads the time when a tubercular patient abhors milk, and the sight of it makes him sick. Such patients will drink two or three quarts of the Kephir in the twenty-four hours with great relish.

The following is a summary of my studies with reference to the physiological action of Kephir :—

1. It is highly digestible, as proven by numerous examinations of the stomach contents before and after the use of Kephir.
2. It improves the appetite.
3. It diminishes waste material.
4. It increases the secretion of the gastric juice.
5. The amount of urine is increased and the specific gravity diminished, the acidity is lowered, urea, chlorides and phosphates are excreted in larger quantities.
6. Nutrition is improved, the colour of the skin becomes healthier, the body weight is increased, and the number of the red corpuscles is heightened.
7. That with reference to the amount of approximate principles of nutritive elements contained in Kephir, the preparation occupies a high station among food-stuffs. According to V. Voit, a healthy male adult requires per day :—

| | | | | |
|--------------|-----|-----|-------|--------------|
| Albumin | ... | ... | 100g. | 410 calories |
| Fat | ... | ... | 50g. | 465 " |
| Carbohydrate | ... | ... | 430g. | 1845 " |

The average analysis of many chemists shows that four litres (about 3½ quarts) of Kephir contains :—

| | | | | |
|--------------|-----|-----|-------|--------------|
| Albumin | ... | ... | 140g. | 600 calories |
| Fat | ... | ... | 80g. | 744 " |
| Carbohydrate | ... | ... | 140g. | 574 " |

From the above it is evident that the addition of one pound of bread will be sufficient to make up the number of heat units necessary for the maintenance of a healthy body.

In conclusion, let me express the hope that Kephir will be more generally used in this country, and I am sure it will prove an important addition to our dietetic and therapeutic armamentarium.—*Dietetic and Hygienic Gazette.*

COAL-TAR DYES AND DIGESTION.

H. A. WEBER has given consideration to the effect coal-tar colours may exert upon the digestive ferments. He has experimented upon pepsin and pancreatin with selected dyes in common use by confectioners and others. For the experiments on peptic digestion the colour to be tested was added to the following mixture: Hydrochloric acid solution (0.2 per cent.), 100 c.c.; pepsin, 0.020 gm.; blood fibrin preserved in alcohol, 1 gram. The fibrin was washed with water before use to remove alcohol, and excess of water removed by pressing between filter paper. The mixture was placed in a test-tube and heated on a water bath at a temperature of 38 deg. to 40 deg. until the fibrin was as far as possible dissolved. Under these circumstances, oroline or acid yellow was found to exert a marked injurious effect upon peptic digestion, but no effect was produced by saffoline (acridine red), magenta or methyl orange under similar conditions. The mixture used for experiments on pancreatin was as follows: Water, 100 c.c.; sodium bicarbonate, 1.5 gram; pancreatin, 0.3 gram; fibrin, 1 gram, and in this case the action of the ferment was unaffected by oroline yellow. On the other hand, saffoline, magenta, and methyl orange completely stopped the action of pancreatin in strong solutions and retarded it to a marked extent in weaker ones.

beer brewed from malt and hops only should pay one duty, and beer brewed with adjuncts should pay a higher duty. He suggested, for the sake of simplicity in assignment of the duty, and for the sake of avoiding misunderstanding on the part of consumers as to the nature of the liquor supplied to them, that each brewer should pay one scale of duty only for all the beer he brewed, so as to become known either as a malt and hop brewer or as an adjunct brewer. He objected to the brewer being allowed to pay a higher duty on that portion of the beer which he brewed with adjuncts and a lower duty on that portion of his beer that he might brew without adjuncts, simply because of the confusion it would result in. The most essential point that he wanted the attention of the committee directed to was that there should be a right by the public to know what they were purchasing when they thought they were buying beer, and that a man when he sold beer should be under an obligation to declare that what he sold, or that it should be known without declaration that what he sold, was of the nature and substance demanded. To attain that he thought that the best and most practical way was to differentiate the duty. If that could be done, very great benefit would accrue without injury—a benefit to all, without injury to any except those who at the present time were making undue use of the power to use and employ other materials to the detriment and depreciation in price of beer materials. If that were done, so far as he could see, it would quite sufficiently meet the case at the present time.—The committee again adjourned.

BEER.

At Greenwich, on May 11, George Brown of the Sugar Loaf, Billingsgate-street, Greenwich, summoned by the Inland Revenue authorities for selling beer diluted with 2·8 gallons of water in a barrel of 36 gallons, was fined £8, including costs.—Henry T. Webb, of 36, Holmshaw-road, Lower Sydenham, summoned for a similar offence, the dilution being 2½ gallons of water in a barrel of 36 gallons, was fined £6, including costs.

At Worship-street, on May 13, Robert Capon Holland, landlord of the Gardener's Arms, Lefevre-road, Old Ford, was summoned by the Excise for diluting beer on his premises.—Mr. Maitland (Maitland, Peckham and Maitland) defended.—The prosecution offered the usual evidence as to the taking of samples from the casks in the defendant's cellar, their analysis at Somerset House, with the result that the one on which the prosecution was instituted was found diluted to the extent of three gallons in the barrel, and proof of the brewed strength.—Mr. Maitland said the analysis tied the defendant's hands down, because he was unable to give evidence himself, and had no cellarman; but he denied having touched the beer after its delivery beyond "fining" it.—Mr. Cluer imposed a penalty of £10 and £2 6s. costs.

At Westminster, on May 15, Roger Reaney, landlord of the Swan public-house, Vauxhall Bridge-road, was summoned by the Excise authorities for adulteration.—Mr. Dennis, who prosecuted, said a sample of stout taken at defendant's house proved on analysis to have been adulterated with a mixture equivalent to rather more than four gallons of water to the 36-gallon barrel.—Mr. T. D. Dutton, on defendant's behalf, pleaded guilty; but urged that this was not one of the ordinary cases in which the publican made a profit by the dilution. Defendant had emptied a quantity of bitter and burton left at the bottom of the barrels into a barrel containing stout. Defendant did not know that he was doing wrong.—Mr. Marsham fined him £10, including costs.

BUTTER.

At Doncaster West Riding Court, on May 1, John Richard Hudson, provision dealer, Sheffield, and owner of the shop known as the "Dairy," High-street, Mexborough, was charged with selling adulterated butter at Mexborough on March 23.—The first witness was Mr. Joseph Wilson, inspector under the Food and Drugs Act, who stated that on March 23, the date in question, he went to Mexborough, where he went round the town taking samples. He called in the shop called the "Dairy," belonging to Mr. Hudson, of Sheffield, and there he asked for a pound of butter. He was served by the manager, and he paid 10d. for it. He told the manager he was an officer under the Food and Drugs Act, and he stated what he had bought the butter for. He sent a third to the analyst, kept one-third himself, and had a third in court. The report from the analyst showed it to contain 40 per cent. of butter and 60 per cent. of margarine. The sample had been analysed before it had lost any of its quality.—The Chairman: Have you any more witnesses?—Inspector Wilson: Only my assistant.—Mr. A. Neil, solicitor, Sheffield, appeared for defendant, and said his client was a large provision dealer, and had seven or eight large shops, including the branch at Mexborough. Now, when a branch was opened, Mr. Hudson gave his assistants most stringent orders with regard to the Margarine Acts. They had very strict regulations, and Mr. Hudson only employed trustworthy men. Also, to prevent any mistake, there were two blocks on the counter. These blocks were made of marble, and one had to be kept on purpose for holding margarine, and the other for pure butter. Mr. Hudson had in all his shops those two departments—one for the pure butter business and the other for the margarine. He might also say that the assistants had to read carefully over the regulations, and a copy was hung in the shop for their guidance. He might say it was an unusual thing to summon the owners; the managers were usually charged. He was going to say it was a case where a mistake had been made by the branch manager. He admitted all the opening facts of the Inspector's statement. It was a mistake on the part of the manager. On the date in question it so happened that the branch manager was clearing out the front windows. In clearing out the margarine window, he, to save time, temporarily slipped some of it into the pure butter vestibule. Now it so happened that the Inspector was round that day, and popped in the shop, and asked for this butter. The putting of the margarine into the pure butter place had clean slipped the memory of the manager, who served the Inspector out of that place. Therefore, the Inspector did not get a fair sample; it was a mixture of pure butter and margarine. He hoped the Bench would dismiss the case, and he continued to read over certain similar cases that had been tried before the High Court, in which Mr. Justice Charles had passed judgment, and he read his opinion thereon. He might say that this young man was only a new manager, but he had been in the stores at Sheffield, and he knew the working of the Margarine Act.—Mr. Greaves said he was manager at the stores known as the "Dairy" at Mexborough. They were opened in November of last year. Previous to coming to Mexborough he was in one of the Sheffield shops. He had been instructed carefully with regard to the Margarine Acts, and copies were hung up at all the stores. To prevent any mistake, whatever, there were two vestibules on the counter—one for margarine and one for butter. He remembered the Inspector coming on March 23. He was that day cleaning out the windows. He had served the Inspector by a mistake. They had one vestibule on purpose for exhibiting margarine, and the other for pure butter. He got a lump of margarine out of the window, and for some time he put it into the butter block. He had forgot

everything about it when the Inspector came in, and he served him out of it.—The Chairman: So this stuff was margarine.—Witness: Not exactly: it was a mixture.—The Chairman: But he asked for butter, and not for mixture.—Mr. Wilson: I might say that he guaranteed it to be pure. I went in and asked for a pound of butter, and I was charged 10d. for it.—Witness: You came in and asked for a pound of tenpenny butter.—John Richard Hudson was then called, and stated that the "Dairy" belonged to him. Altogether he had ten shops. The one at Mexborough was his. He had given the manager careful instructions with regard to butter and margarine. To make it more certain there were two receptacles in the shop, one for margarine and one for butter. Pure butter was now 1s. per pound. Margarine was 4d., 6d., and 8d. per pound, and mixture 10d. He was very particular in giving his men instructions in regard to the Act.—The Bench, after a little consultation, fined the defendant £5, including costs.—Fred Uttley, provision dealer, Mexborough, was then charged with selling adulterated butter at Mexborough on March 23.—Mr. Baddiley defended.—Mr. Joseph Wilson stated he was taking samples in Mexborough on that date, and he called into defendant's shop and purchased a pound of butter, for which he paid tenpence. He had sent part of it to the public analyst, who had sent word to say it contained 40 per cent. butter and 60 per cent. margarine.—Mr. Baddiley: It's just about a similar case to the last.—The Chairman: Oh, the same mistake as in the last case. (Laughter.)—Mr. Baddiley: Well, not exactly. (Laughter.) There was a mistake though. (Laughter.) He went on to say that in this case it was the mistake of one of the assistants. He had put the card "pure butter" on the margarine by mistake. It was impossible to tell one from the other, as they looked exactly the same, and it could only be detected by the taste. Mr. Uttley had given his men very stringent instructions with regard to the Margarine Act.—The Chairman: You say that a wrong card was placed on the butter.—Mr. Baddiley: Yes.—Rowland Carr stated that he was the manager at the South Yorkshire Provision Stores, High-street, Mexborough. He had received all instructions respecting the Margarine Act by his master, Mr. Uttley. He spoke as to the assistant having placed the wrong ticket on the margarine on that date. They had the butter at 10d. and 1s. per pound, and margarine at 4d., 6d., and 8d. They could not detect margarine by the colour. It was exactly the same as butter, and you could only tell it by the taste. It was a pure mistake on the part of the assistant.—The Chairman: Do you get a regular salary, or are you paid on commission?—Witness: By salary.—The Chairman: How do you account for it?—Witness: The labelling.—The Chairman: How are they labelled; by tin tickets?—Mr. Wilson: By tin tickets.—The Chairman: And it is possible for a wrong one to get placed on?—Witness: Yes, quite possible.—A fine of £5 and costs was inflicted in this case.

At Greenock, on May 14, several shopkeepers pleaded guilty to having unlabelled, or imperfectly labelled, margarine in their premises. Helen Wallace, 64, Vennel, was fined £3, and James Wylie Graham, 29, Roxburgh-street; Samuel White, 43, Vennel, and Robert Morris, 23, Vennel, were each fined £2. Morris pleaded not guilty, and stated that if he had broken the law he had done so through ignorance, and thought he might have been warned by the inspector. In three of the cases the labels were only half the size required by the Act.

ADULTERATION IN THE COUNTY OF DURHAM.

THE Chief Inspector of Weights and Measures and Food and Drugs (Mr. B. Scott-Elder) reports that:—

1. During the past quarter the annual adjustment of

traders' weights and measures has been commenced in all the districts. The work of inspection has also been proceeding, and as a result five prosecutions have been instituted for offences of various characters, none of which, however, calls for special mention.

2. The trade in glass measures is proceeding briskly. During the quarter 74,418 have been examined and tested, out of which 8,946 were rejected, and 65,472 stamped, the fees received amounting to £272 16s. It is gratifying to find that out of the large number of glasses stamped—in all nearly half a million—not one has been returned as inaccurate, although they have been sent to all parts of the kingdom, and are doubtless subjected to the inspection and examination of many different inspectors.

FOOD AND DRUGS.

3. During the quarter 131 samples of food and drugs have been submitted to the county analyst by your inspectors, and proceedings have been instituted in six instances.

4. We have continued to give attention to articles sold in penny and twopenny bottles, and as a result three cases of adulterated glycerine have been detected, the adulterant in each case being water. Two of these cases occurred in my own district, and came before the Castle Eden magistrates, who, after an exhaustive hearing, and after an adjournment to allow the defence to call expert evidence, inflicted fines and costs amounting in the aggregate to £7. It was brought out in evidence that no part of these penalties would be paid by the tradesmen themselves, as in both cases the wholesale dealers had agreed to protect them from loss. In one case I am informed that the particular brand of glycerine was immediately withdrawn from sale throughout the county. The third case was in the Chester-le-Street Division; the county analyst dealt with it as "distilled glycerine," but the analysts at Somerset House, to whom the magistrates submitted a portion of the sample, dealt with it as "glycerine" simply, and consequently did not corroborate the county analyst, and the case was dismissed with costs against the county.

5. It affords me pleasure to report that our recent action with regard to condensed milk has not been without results, as I have reason to believe that, owing to it, increased activity has been shown by local authorities not only within, but beyond the limits of the county.

6. Out of several samples of new milk examined, only one was found to be adulterated (No. 95 in the schedule), and in that case the defendant did not pay the fine, but went to prison in default.

Although the county is to be congratulated on the purity of its milk supply, I am not quite sure that those who offer it for sale are fully alive to the obligations imposed upon them as regards cleanliness. Milk is particularly subject to contamination, and is a ready means of spreading infection, and it is of the first importance that the rooms in which it is stored, and the utensils in which it is kept and sold, should be scrupulously clean.

7. Several cases of sugar adulterated with carbonate of lime, etc., having recently been detected in other counties, I gave instructions that samples be taken in this county, but although a very considerable number was obtained, it is very significant that not the slightest trace of adulteration was discovered in any of them.

8. I have to call the attention of the council to an important decision which has been recently given in the Queen's Bench Division of the High Courts of Justice in the case of "Jones v. Thomas." The decision has reference to the notices which are exhibited in many public-houses to the effect that "All spirits sold in this establishment are diluted." The Court held that such a notice was not a sufficient protection to the seller, and the case was remitted to the magistrates who

thereupon convicted. It will be remembered that this was the precise point which we endeavoured to raise, but without success, in McQueen's case (from Ryhope), and I have to remark that although similar notices are very prevalent in certain parts of this county, that specific defence has not since then been accepted by the magistrates in a single instance.

SPIRITS.

At Reigate, on May 17, Edwin James Hamnett, of the Warwick Arms Hotel, Redhill, was summoned for selling to the prejudice of Joseph Paxton Humphrey, inspector under the Sale of Food and Drugs Act, certain Scotch whiskey which was not of the nature, substance, and quality of the article demanded.

Dr. Grece prosecuted on behalf of the corporation; Mr. James Nightingale (Morrison's and Nightingale) appeared for the defendant, and intimated that he had no objection to the members of the Council on the Bench sitting.

The Mayor: The Magistrates had been considering when they should retire.

In opening the case, Dr. Grece said that, in pursuance of general instructions, the inspector took samples of whiskey at different places on March 31, and all were found to be equal to the regulation standard with the exception of two, which latter were attributable to some oversight or mistake, and not to any intention on the part of the licensed holders. It was singular that these defective samples were obtained at two of the most established, best known, and best regulated licensed houses within the borough.

Mr. Humphrey deposed to instructing his assistant to purchase samples on the day in question. Witness met him at defendant's door, received from him the sample he had purchased there, and then went inside with it and gave the usual caution as to who he was and what the article was bought for, and offered to divide the whiskey (a pint) into three parts, which was accepted. He believed the person's name who served the whiskey was Frank Hopgood. He took ten other samples that day. Witness produced the certificate of Dr. Stevenson, the public analyst, which was that the sample was two per cent. below the 25 per cent. allowed by the Act.

In cross-examination, witness said the whiskey was purchased at the hotel tap, though he did not know it was separate from the hotel at the time; he thought it was merely another entrance. He did not know, as a matter of fact, that only a bottle was kept at the tap, and not a cask, though he should say it was very likely.

And if that bottle was not hermetically sealed, would not evaporation ensue?—Certainly.

And would possibly account for the result of the analysis?—Possibly. He did not dispute that the bottle had to be tilted to supply the pint, though he could not say it was of his own knowledge.

Two per cent. is a very small amount? Yes; but still it is sufficient (laughter).

The inspector's assistant (Mr. Wickham) was called, but

Mr. Nightingale admitted the sale. He then submitted to the Bench, in the first case, that the purchase as made did not come within the category defined by the Act—namely, any medical officer of health, inspector of nuisances, or any police-constable, under the directions of the local authority, might procure, etc.

The Acting Clerk (Mr. Chamberlain Mole)—Is it not by his servant?

Dr. Grece said the point raised had already been settled by a decision, which he quoted. It was to the effect that any officer or person might procure by himself personally, or by agent or deputy, as instructed by him, which latter was the course usually pursued, as the inspector himself soon got known.

Mr. Nightingale did not wish to press that matter, because his client could account for the deficiency in the strength of the spirit. The real facts were these. The supply to the customers using the tap was taken from a gallon bottle, and at the time of this purchase it contained only about the quantity asked for, so that the person in charge had to tilt the bottle. Their worships had heard from the inspector that if a bottle was not hermetically sealed evaporation did take place, and he (Mr. Nightingale) was instructed to say that that was the reason of this whiskey being under the regulation strength to the extent certified. There was no desire on the part of Mr. Hamnett to defraud the public, and as this was an ordinary matter, he confidently asked the Bench to dismiss the summons.

The Mayor said there would be a fine of 10s. and costs.

WILLIAM ALFRED LAKER was summoned for a similar offence, the whiskey in this instance being purchased at the refreshment-rooms at Redhill Station.

Dr. Grece said the case was similar to the preceding one, and therefore he would not enter further into it. All he would say was that he extremely regretted himself personally that these proceedings should have taken place at a time when Mr. Laker had been plunged into such a very great affliction by a great domestic calamity.

The inspector produced the analyst's certificate, which was to the effect that the sample was $4\frac{1}{2}$ per cent. under the regulation strength.

Mr. Nightingale explained to the Bench that the deficiency in this case arose purely from a mistake by Mr. Laker's cellarman. Mr. Laker had been in the habit of purchasing whiskey at three per cent. over proof, and he was advised by his merchant to have it at a different strength. He had a quarter cask in, which the cellarman tapped unknown to his master, and Mr. Laker, not aware that the cask had been tapped, had a gallon taken from it and sent over to the refreshment room. It was, of course, unfortunate that it should have happened on the very day the inspector was there, but Mr. Laker positively assured him that the mistake, which he greatly regretted, occurred in that way, and he left the matter in the hands of the Bench.

The Mayor said the fine and costs would be the same as in the previous case.

At the High Bailiff's Court, at Douglas, on May 8, Henry McClusky was charged, at the instance of John Cain, inspector under the Adulteration Acts, with having sold certain whiskey to the plaintiff which was not of the same quality as was demanded by him.—The charge was admitted by the police.—Inspector Cain said that on April 26 he went to the defendant's public-house, the Legs of Man, in Ridgeway-street, and asked for a pint of Irish whiskey, for which he paid 1s. 6d. This he handed to the public analyst, Mr. J. F. Terry, who had certified that it was adulterated to such an extent as to render the spirits 5·7 degrees below the legal standard.—The High Bailiff: Was the adulteration the result of age or of water?—Witness: Of water.—A fine of 20s. and costs, or 14 days imprisonment, was imposed.—The same defendant was also charged with selling a quantity of rum, which was certified by the public analyst to be 4·9 degrees below the legal standard. A similar fine was inflicted in this case.

AN OUTING AT THE PUBLIC EXPENSE.

THE Commission on the tuberculosis farce is still posing. Sir Herbert Maxwell, the chairman, has gone to the Continent to investigate the principle of meat inspection in various countries. He is accompanied by Mr. Clare and Mr. Speir, members of the Commission; by Professor McFadzean, president of the Royal College of Veterinary Surgeons; and by Dr. Legge, secretary of

the Commission. They propose to visit Halle, Leipsig, Cologne, Dresden, and Copenhagen, and will observe particularly the management of public slaughter-houses. They also hope to have interviews with Dr. Koch of Berlin, and Professor Bang of Copenhagen, so as to ascertain the latest results of researches respecting the use of tuberculin, both as a test and as a preventive of tuberculosis. The Commissioners will, it is expected, remain on the Continent for some three weeks.

IMPORTANT APPEAL CASE.

In the High Court, Queen's Bench Division, on May 19, before Justices Day and Lawrance, the case *Smith v. Jeffreys* was heard.

This was an appeal by way of special case from the decision of certain justices at Chippenham, who refused to convict the respondent of an offence under Section 6 of the Food and Drugs Act, 1875.

Mr. G. A. Scott appeared for the appellant, while Mr. Foote represented the respondent.

It was stated that respondent, who kept the refreshment rooms at the Great Western Railway Station at Chippenham, was summoned for having sold Irish whiskey adulterated with water, and below the prescribed strength. It was admitted that the whiskey was below the prescribed strength, but it was contended on behalf of the respondent that the diminished strength of the whiskey was due not to adulteration, but to evaporation, the whiskey having been in stock for sixteen months when the sample was purchased. The justices, after hearing the evidence, held that the offence charged had not been proved, as they believed the testimony of the respondent's witnesses in that respect. The inspector under the Food and Drugs Act now appealed against that decision, and argued that an offence against the Act had been shown as the whiskey was below the prescribed strength.

Mr. Justice Day said the justices had decided the case just as any persons of intelligence might have been expected to decide it on the evidence before them. The respondent was charged with selling whiskey under strength "after diluting it with water." The justices found that no water had been added to the whiskey, and that the larger amount of water found was due to the evaporation of the spirit. The conclusion was not only a sensible one, but one which was warranted by the facts, and the appeal would be dismissed with costs.

Mr. Justice Lawrance concurred.

Appeal dismissed accordingly with costs.

MILK—AND HOW TO SELL IT.

(Continued from page 238.)

My second head is

HOW TO AVOID WASTE OF MILK AND LOSS OF MONEY.

BOTH the public and the dairyman have a united interest in this also. I do not propose to go into every form of preventing waste of milk and cream, and avoiding thereby the commercial loss accruing to such waste. Different businesses find out different expedients for the utilisation of all materials purchased for trade, but there is one question in this connection which calls for special remark. I refer to refrigeration and the careful use of a harmless preservative. When a dairy-

man delivers his milk and cream to a house, hotel, hospital, or restaurant, he does not know where the vessels containing these may be set. They may be put and kept in a warm kitchen or close atmosphere, and after a few hours they are perfectly tainted, and, as a rule, the purchaser has to bear the loss. In some cases—nay, I may say in many cases—the milk is partaken of, and diarrhoea or some other ailment sets in to the annoyance of all concerned, and the dairyman in most cases has to stand the brunt of it all; the purchasers forgetting, or perhaps not knowing, that the milk has come from a long distance; and forgetting further, if they think at all, that it is a very perishable article, and forgetting still further, that it ought to have been set in the coolest and cleanest place instead of the warmest and worst place. Now medical science and chemistry have aided merchants, farmers, and dairymen in many ways to protect the public interests by enabling them to keep perishable articles from early decomposition, and the value of every such discovery is for the common weal of mankind. It increases the possibilities of trade and commerce; besides it is a gain to business generally, because it widens the area of purchase in respect to every article of diet, milk included. What we want to keep the public and the dairyman right is an absolutely safe and harmless preservative which can be taken in milk by old and young, a preservative which is safe in the nursery for children, and in the sick room for invalids; one which every mother, nurse, and medical man would hail with pleasure.

I noticed from the decision of the Select Committee, which sat for over two years on the Foods Adulteration Act, that they consider some preservatives are unobjectionable; still it would be well that medical men should give this subject their close attention, for, as years roll on, there will be more difficulty than ever in keeping milk and cream perfectly sweet for even a few hours after it arrives in towns. As you all know, it is quite impossible for the farmers near large towns to supply all the milk that is required for the people, and every year almost some of those farmers who drive their milk into town are being pushed further away, some of them being pushed out of existence altogether, owing to the rapid progress with which the building trade is being carried on. In being guided by the medical profession, the dairyman, as a rule, will be well advised; but I would still impress on all concerned that, whatever preservative is used, it should have the sanction of our Government and the Court of Reference, and that such a preservative must be absolutely harmless, and used solely for preventing waste and decomposition.

After a sojourn in the country, people often wonder at the difference between the keeping properties of the milk they got there and of that which they get in towns. If they saw the scientific analysis of the pollution of the atmosphere, and the dusty and microbic constituents of a cubic inch of air in the city, they would have the thing explained. In this connection, I might mention that, in an article on the atmosphere of Glasgow, which appeared in the *Glasgow Herald*, it was pointed out that, taking Valentia, in Ireland, as a standard purity of 1, Liverpool fell to be reckoned as having 29.89, Manchester 35.94, and Glasgow 50.55, of impurities in the air. It must, therefore, be remembered that the atmosphere of a city like Glasgow causes all the milk which is carried through it to undergo considerable pollution. It has been calculated that one cubic inch of Glasgow air contains seven millions of particles, while the same amount of air in a high altitude contains but four thousand. It is in such an atmosphere that the Glasgow dairyman's commerce is conducted. He cannot, therefore, afford to despise or reject any aid which science affords him in combating the deleterious influences of the atmosphere upon the milk he sells.

(To be continued.)

**To the Grocers, Provision Merchants, Pastry-
Cooks, Confectioners, and the Public
of the United Kingdom.**

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Food & Sanitation

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LONDON: SATURDAY, MAY 29, 1897.

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Food and Sanitation.

SATURDAY, MAY 29TH, 1897.

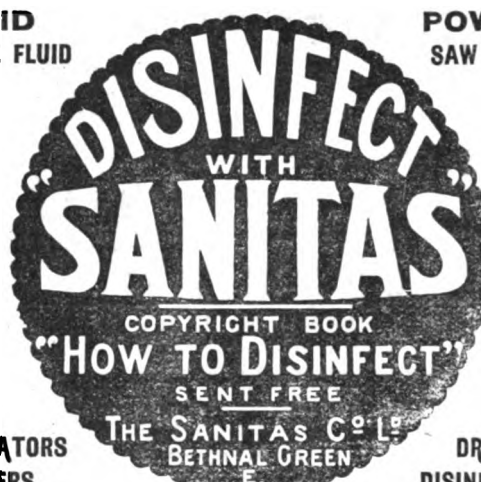
IS SALT A NECESSARY CONDIMENT?

By CARL FEHLAUER, M.D.

It is somewhat remarkable that, of all the many nutritive salts contained in our food, only one, kitchen salt (chloride of sodium) is deemed by most people to be present in insufficient quantity, wherefore they add inorganic mineral kitchen-salt as a condiment to what they eat.

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It is quite true, however, that our present day physiologists (who generally seek to defend the use of all commonly-used foods and condiments whatever, and furthermore include alcohol and pungent spices amongst the indispensable), maintain that the addition of salt to our foods is absolutely necessary, being led by the following reasoning: Because the quantity of salt secreted by the kidneys amounts to from twelve to twenty grams daily, and because so great a quantity is not contained in the foods eaten, we must apparently supply the deficiency by the addition of mineral salt, unless the body is to suffer for the insufficiency of saline matter. It is stated that the negroes in Africa, who generally cannot procure salt, show an extraordinary desire for it, and that negro children, if given a piece of rock salt by some passing traveller, suck it with delight, just as our European children do sweetmeats. He who could afford to use salt every day would be regarded as a man of wealth amongst these tribes.

This question has been dealt with by a most conscientious and unprejudiced scientist, Dr. G. Bunge, Professor of Physiology at Basel, and he has come to the following conclusions: That on a diet chiefly of animal food it is possible to live without adding salt, and that fishermen, hunters, herdsman, who live on flesh, fish, and milk, do not salt their food; but that those uncivilised races which live partly on vegetable food, always add salt to it. Bunge gives as a reason for this, that animal foods contain relatively less potash salts and more soda salts; but that in vegetable foods, on the contrary, potash salts are present in much larger quantity, and that therefore it is absolutely necessary to supplement the soda salts by the addition of kitchen-salt. Hence it is that we have a great desire for salt as a condiment for potatoes and pulse, which are particularly rich in potash salts.

In spite of all this, we maintain, and can adduce proofs thereof, that those people who live wholly or chiefly on vegetable foods are not only able, without disadvantage to the body, to dispense with salt, but that by so doing avoid the injurious effects which salt has on the health. Of course, the nutritive salts contained in the vegetable food must not be extracted by unsuitable preparation of the dishes (for instance, by prolonged stewing, or by throwing away the water in which they have been boiled). Indeed the reason why nations living principally on vegetable foods are eager to get salt may be that their manner of preparing their dishes is a false one.

Such washed-out vegetable-foods certainly taste flat, so that salt seems a suitable addition. Flesh-foods, on the contrary, being cooked in only a little water, lose less of their nutritive salts; but the flesh from which beef-tea and such like has been made, and therefore

is quite cooked out, tastes no better than the washed-out vegetables.

But even the amount of salts which, according to Prof. Bunge's view, should be added to vegetable foods is very small, and far less than the usual immoderate consumption which must act most injuriously on our organs, and more particularly on the kidneys. Prof. Bunge on this point remarks: "I must, however, say that the quantity of salt which most people add to their food is far too great. Salt is not only a food but a condiment, and easily seduces, as all condiments do, to over-eating. With cereals and legumes, for instance, one or two grams of salt per diem would suffice, with rice a few decigrams, instead of which the majority of persons consume some twenty or thirty grams daily, and even more.

"We must ask ourselves the question: Are our kidneys capable of eliminating such large amounts of salt? Are we not over-burdening them with work, and may not this be injurious? On a diet of flesh and bread, without salt, we secrete daily about six or eight grams of alkaline salts every twenty-four hours. On a potato diet, with salt as condiment, over 100 grams of alkaline salt pass through the kidneys. May this not be dangerous? The consumption of alcoholic drinks, which is taken to be one of the causes of nephritis (inflammation of the kidneys), creates a demand for the immoderate consumption of salt, one unnatural and injurious habit generally drawing others in its train. These are questions to which I would draw the attention of medical men.

"No organ of our body is so badly treated as the kidneys. The stomach protests against being over-burdened; the kidneys have to quietly suffer everything, the ill-treatment first becoming apparent when it is already too late to cope with the injurious results."

But even the small quantity of salt which Bunge thinks necessary is not really required. In fact, just pulse and potatoes (the latter boiled in their jackets or roasted over hot ashes), will be found particularly palatable by those who wish to break themselves from the salt-eating habit, without any addition of salt whatever. For they are exceptionally rich in nutritive salts as a whole, even though the soda-salts are only present in small quantity compared to the potash salts. The best proof we have that the use of mineral salt is unnecessary, and indeed injurious, is the fact that those persons who have made no use of salt for years have quite an aversion to dishes containing it, even if only present in trifling quantity: whereas if mineral salt were really a necessary food, they should have an intense desire for it. And this disgust for foods prepared with salt we have particularly observed amongst vegetarians—that is, people living on a vegetable diet, eating no flesh-meat at all.—*The Vegetarian*.

OLEOMARGARINE AND WASTING DISEASES.

THE *Scientific American* appreciates the value of oleo-margarine to the extent of recommending it as a substitute for butter in the diet of consumptives, and also as a companion product if not a substitute for cod-liver oil. It says:—

"The problem of nourishment in wasting diseases is perennial. In most instances the balance between waste and repair is greatly to the credit account of the former, despite all the resources of the medical art. . . . With the first introduction of cod liver oil, it was believed that the problem of nourishment in wasting diseases was solved. But there is nothing magical about this oil. Save as an easily digested fat, it is valueless.

"In every-day life butter is very essential. Its free use by sufferers from wasting diseases is to be encouraged to the utmost in so far as it can be borne.

All this seems very simple, but unfortunately an excess of butter diet, even in a healthy organism, is apt to give rise to butyric dyspepsia, and butyric fermentation is set up largely through the presence of a ferment—a residuum left by the butter milk.

"Considering the foregoing, it seems strange that oleo-margarine has not been thought of as a palatable and suitable article of diet for those suffering from wasting diseases. It is free from all objections. There are a large number who imagine oleo-margarine is made from any old scraps of grease regardless of age or cleanliness, which is quite the reverse of fact; indeed, a good oleo can only be had by employing the very best and freshest of fat. This 'artificial butter' is as purely wholesome (and perhaps even better as food) as the best dairy or creamery product."

Recently, Jollies and Winkler, who are the official chemists for the Austrian Government, after a very thorough investigation, announced, through the columns of the *Zeitschrift für Hygiene*, that the only germs ever present in oleo are the variety common to air and water. Although carefully sought for, tubercular bacilli and other obnoxious bacilli were conspicuously absent. They also found that the dairy product is especially liable to be contaminated, inasmuch as the best process of manufacture failed to eliminate all the lactic acid ferment, the action of which even salt cannot neutralise, save for a very brief period.

"It is surprising the amount of fat that a consumptive finds it possible to consume when employing oleo instead of butter."

COMBINATION FOR FARMERS.

JOHN WAGSTAFFE, a farmer, of King's Grove, Brailsford, Derby, was summoned before Mr. Bros, at Clerkenwell, on May 12, by Sanitary-inspector Ward, of the Islington Vestry, for having on March 14 sold milk containing 20 per cent. of added water.—Mr. Bramhall prosecuted, and Mr. Ricketts defended.—The inspector took some samples of defendant's milk on its delivery at Finsbury Park railway station, and it proved on analysis to be adulterated to the extent of 20 per cent. of added water.—The defendant proved that when he sent the milk it was pure and unadulterated. The railway companies would not take the milk if the churns were sealed, and he could not tell what might happen to it during transit.—Mr. Bros said he had no doubt of the honesty of the defendant, but it was ridiculous to say the companies would not take the milk in sealed churns. They must take it, for surely the farmers were strong enough to combine and force the railway people to carry the milk when in sealed churns. Under the circumstances he would be satisfied if the defendant paid the costs.

MILK.

At Yarmouth, on May 14, William Adams, of Stonehouse, Ormonde-road, dairyman, was summoned for selling adulterated milk, and pleaded guilty.

The Town-clerk, who prosecuted, said an analysis showed that 17 per cent. of fat had been abstracted from the milk, and 4 per cent. of water added.

Asked what excuse he had to offer, defendant said he was in trouble the morning when the inspector took samples, having a death in his family, and did not know what he did.

A fine of 20s. and 21s. 6d. costs was imposed.

Charles Hewitt, dairyman, 135, Northgate-street, was summoned for a like offence. Mr. J. A. H. Ferrier defended. The Town-clerk supported the information.

Inspector Hassall said that on April 14 he bought 1½ pints of milk of defendant, and when he told him it was for analysis, he said that it was not new milk. The

analyst's certificate showed that there was 13 per cent. of added water and 6 per cent. of cream abstracted.

Mr. Ferrier's defence was that one of defendant's cows having become ill, he had to go to the last defendant and buy half-a-gallon to make up the deficiency. This milk was put into his cans, and shortly after the inspector came. Whenever his milk had been previously analysed it had been found to be the best in Yarmouth.

A fine of 20s. and costs 21s. 6d. was inflicted.

Henry Lambert, dairyman, 55, Garfield-terrace, North-denes, was also summoned for selling adulterated milk. Mr. W. Joseph (from the office of Mr. H. Chamberlin) defended.

Inspector Hassall proved the purchase of a sample, which was certified to be adulterated with "at least 25 per cent. of added water."

The defence was that the milk was sold as supplied to defendant, who had retailed milk in the town for fifteen years without the slightest complaint hitherto. It was moreover suggested that at the time only a small amount of milk remained in the pail, and it was a well-known fact that cream always rose to the top. Mr. Joseph descanted on the fact of a cow giving milk of different quality at different times.

The Town-clerk, in cross-examination of defendant: Does your wife stir up the milk before she sells it?

Defendant: Yes.

The Town-clerk: Then there ought to be cream at the bottom of the churn as well as the top, shouldn't there?

Defendant was staggered by this poser, and made no answer.

He was fined 20s. and 21s. and 6d. costs.

ARBROATH AND ITS MILK SUPPLY.—A report by Mr. Macdougald, Public Analyst, on eight samples of milk taken by Mr. M'Neill, the Sanitary Inspector, states:—No. 1, slightly low in fat; Nos. 2 and 3, high class; No. 4, ordinary milk; Nos. 5 and 6, very high class; Nos. 7 and 8, ordinary milk. Mr. Macdougald, in forwarding the result of his analysis to Mr. M'Neill, remarked that he was glad to be able to say that the milks as a whole were of good quality. He (Mr. Macdougald) did not know whether those whose interests Mr. M'Neill were watching knew of the value of such periodical testing of the milk supply. He had made a calculation, based on statistics of other places, and had found that the inhabitants of Arbroath spent at least from £16,000 to £17,000 per annum on milk. If the quality was raised, say, only 5 per cent., by periodical inspection, that would mean a saving to the consumers of at least £800 per annum. It would, therefore, be evident that the expense connected with such inspection was infinitesimal as compared with the almost certain advantages arising therefrom.

At Reading, on May 15, Francis Edward Cruse, of 423, Oxford-road, a shopkeeper, was summoned for selling milk from which a portion of the fat had been extracted, on April 22.—Mr. Millington, Deputy Town Clerk, represented the Corporation, and stated that the proceedings were instituted under section 9 of the Food and Drugs Act of 1885. The penalty prescribed by that section was £20. He called Clarence Kemp, assistant in the Surveyor's department of the Corporation, who proved the purchase of a pennyworth of new milk at defendant's premises, stating that he was served by Mrs. Cruse.—Mr. W. H. Robertson, Inspector of Nuisances, gave evidence as to sending the last witness into the shop to purchase the milk on his behalf, and to afterwards acquainting defendant's wife of the steps he intended taking of having the milk analysed. He subsequently submitted the sample to Dr. Ashby, and received a certificate in due course, showing the analysis of the milk.—Mr. Millington produced Dr. Ashby's certificate, showing that the milk was deficient of 60 per cent. of fat. In the present sample there was only 1.19 parts of fat, and the recognised standard was 3 per

cent. The abstraction, therefore, amounted to a little over 60 per cent. of the fat. Mr. Millington added that never during the time these Acts had been in force had a case been brought before that Bench in which the abstraction of fat was so enormous as it was in the present case. In the interests of the public, he therefore urged the magistrates not to inflict a mitigated penalty, the extreme fine being £20.—The defendant's defence was that he bought more for his own use than for the purposes of sale, and that in the present case the milk was sold in the same natural state in which he bought it.—The Bench convicted, and fined defendant 40s. and 10s. costs, the Chairman remarking that defendant had practically no defence.

At the Oldham Police-court, on May 13, Mrs. Agnes Harrison, Pitses Farm, Alt, was summoned at the instance of the Sanitary Committee of the Corporation with having sold adulterated milk. Mr. Cook (assistant Town Clerk) prosecuted, and Mr. Gartside defended.—Mr. Cook, in stating the case, said on April 11 a sample of milk was taken from the defendant's cans in the street. This was forwarded to the analyst (Mr. Estcourt), together with a subsequent sample taken from the defendant's farm. The result of this analysis was that the first sample was found to have 5 per cent. of added water. The charge against the defendant was that she had adulterated the milk and sold it to the prejudice of the purchaser. It was not a bad case so far as the added water was concerned, but the offence was aggravated by the fact that it was a very poor sample of milk.—Dr. Tattersall and Inspectors Thomas and Bennett gave formal evidence in support of the charge.—Inspector Thomas said that when he took the first sample he asked the defendant if the milk was from her own cows, and she answered in the affirmative. On the occasion of taking the second sample the defendant said the previous milk was partly from her own cows and partly purchased from other dealers.—The defence was a denial of any adulteration.—Mrs. Harrison stated that on April 11, in order to supply her own customers, she purchased milk from several dealers. She denied having adulterated the milk.—Fined 10s. and costs.

STEPHEN JOHNSON, Woodhouse Farm, Froghall, Cheadle, Staffs, was also summoned for an offence under the Food and Drugs Act by having sold milk, which, on analysis, was found to be deficient of fat to the extent of 23 per cent. This case was heard before Mr. E. Meek and Mr. Adam Lee. Mr. Cook prosecuted, and Mr. Macefield (Messrs. Blagg, Son, and Macefield, solicitors, Cheadle), defended.—Mr. Cook in opening the case, said the sample was taken from the defendant's milk cans on arrival at the station on April 9. He produced Mr. Estcourt's certificate of analysis.—Mr. Macefield raised an objection to the certificate, and submitted that it was invalid inasmuch that the analyst had omitted to state thereon whether there had been any change or decomposition in the component parts of the milk. A legal argument, in which Mr. Cook contended that this was not an essential part of the certificate. Replying to the Magistrate's Clerk, Mr. Cook and Dr. Tattersall said the analyst had usually included a note as to the change, if any, in the milk on his certificate, and that they had not previously noticed the omission.—The Magistrates upheld Mr. Macefield's objection, and dismissed the case.—Mr. Macefield applied for costs. He said this was a serious matter for his client, whose Oldham customer had withdrawn his order since the commencement of those proceedings. He had a full and perfect answer to the case on its merits if the facts had been gone into.—Mr. Cook objected on the ground that the defendant had succeeded on a technical point.—The Magistrates, after some deliberation, granted the defendant £4 4s. costs.

At Manchester, on May 19, Joseph Needham,

farmer, Highfield House, Flagg, near Buxton, was fined 20s. and costs, by Mr. Headlam, for consigning to a Manchester milk dealer two samples of milk, each containing 6 per cent. of added water. — Alfred M'Gowan, of Hayden-street, Queen's-road, was fined 20s. and costs for selling milk of which 12 per cent. of the fat had been extracted; and Alice M'Kaig, Hope-street, was fined a like amount for selling milk which contained 3 per cent. of added water, and from which fat to the extent of 17 per cent. had been abstracted.

At Cork, on May 19, Mrs. Mary Walsh, shopkeeper, 34, Nile-street, was summoned at the suit of the Corporation for having, contrary to the provisions of the Food and Drugs Act, sold milk which on analysis was found to be deficient in fat to the extent of 23 per cent. — Mr. B. C. Galvin, solicitor, prosecuted on behalf of the Corporation, and the defendant was not professionally represented. — The purchase and analysis having been proved, the defendant said the milk was sold as received. A fine of £2 and £1 costs was imposed, Mr. Mayne saying it was the worst case that ever came before him.

COVENTRY AND ADULTERATION.

THE City Analyst (Dr. Bostock Hill) reported that during the quarter ending March 31 he received from Inspector Clarke 22 samples of food for analysis, as follows: Milk 11, butter 8, sweets 1, pepper 1, and mustard 1. Three of the samples of milk were adulterated in each case by the removal of cream, the deficiency being 30, 20, and 15 per cent. respectively. All the samples of grocery and sweets were genuine, but no less than six of the eight samples of butter contained boric acid as a preservative.

GINGER.

At Haslingden, Alice Haworth, 479, Blackburn-road, grocer, was charged with selling adulterated ginger. Mr. J. L. Whitaker was for the prosecution. — P.S. Tyndale, Rawtenstall, stated that on the afternoon of April 13 he bought 4 ozs. of ground ginger at defendant's shop, being served by defendant's daughter in the presence of defendant. He divided it into three parts, one of which he gave to Supt. Proctor. — Supt. Proctor said he sent the sample to the public analyst, who certified that 25 per cent. was spent ginger, and 75 per cent. genuine ginger. — Defendant thought the ginger had been affected by being kept in a damp place at the end of the building. — Fined 10s. and costs.

ADULTERATION OF CONDENSED MILK.

THE convenience and cheapness of condensed milk, and its supposed better keeping properties, have led, says a writer in *Treatment*, to its very wide use in spite of the serious drawbacks to its use as a staple article of food for infants. That even the best brands often do great harm by interfering with proper nutrition, and favouring the development of rickets and scurvy, is well established. And this being true of brands that are prepared by the concentration of cows' milk of good quality, it may be imagined that a much more serious indictment could be brought against some inferior kinds in the market. The mysteries of composition of these have not yet been satisfactorily revealed, but it is known that milk is by no means the only ingredient. The writer has it on good authority that at the present time a vegetable article is being largely imported, and being bought by certain milk manufacturers for the purpose of adulterating their wares. The adulterant is known commercially as the "Tiger Nut," and has the appearance of a rhizome, is no larger than the last joint of the little finger, and

resembles a diminutive root artichoke. It is not unpleasant to taste, the flavour being strongly suggestive of condensed milk. It is possible that in this ingredient we have the explanation of some cases of condensed milk wasting and dyspepsia. It is stated that "it is only used in the preparation of some of the cheaper brands." Comment is needless.

SPIRITS.

At Watford, on May 11, Henry Kemp, landlord of the Rose and Crown Hotel, Watford, was charged with unlawfully selling to Inspector Rushworth half-a-pint of Irish whiskey, adulterated, at Watford on April 21. — Mr. Turner defended, and pleaded guilty. — William Grasswell Rushworth stated that he purchased a pint of Irish whiskey from the defendant's premises on the day in question, which, when analysed by Mr. A. E. Ekins, analyst, St. Albans, was found to be 7 degrees under the legal limit of 25 degrees allowed by Act of Parliament, which was equal to 9 per cent. of water. — Mr. Turner admitted the facts, and stated that this happened on Bank Holiday. The stock ran out, and as he had the misfortune to break the hydrometer, he guessed at it, and, unfortunately, over did it. Directly the mistake was found out, a fresh hydrometer was procured, and all the spirits in the house tested. — In answer to the Chairman, Mr. Rushworth stated that the whiskey was in the bar. — Mr. Turner mentioned as a set-off that the brandy at the Essex Arms was always reckoned to be a little too strong. (Laughter.) — The magistrates accepted the explanation, but as Mr. Kemp was responsible, fined him £1 12s. 6d. including costs.

At Reigate, Edwin J. Hamnett, of the Warwick Hotel, and Wm. A. Laker, of Laker's Hotel, both of Redhill, was summoned at the instance of the newly-appointed Inspector under the Food and Drugs Act for the Borough of Reigate (Joseph Paxton Humphrey) for selling spirits which were not of the nature, substance, and quality of that demanded by the Act. — Dr. Greece appeared on behalf of the Corporation to prosecute, and Mr. James Nightingale defended. Although the cases were taken separately, there can be no doubt from the evidence adduced that the offence committed was in both instances of a very trivial character, and in Mr. Hamnett's case the operation of the laws of nature, viz., "evaporation," were more contributory to the result than any felonious purpose. As regards the charge against Mr. Laker, the cause of action arose from the mistake on the part of the cellarman, who acted without his principal's authority. — Under any circumstances, both came within the pale of the law, and were dealt with in the usual way. — In opening the case Dr. Greece said that the Borough Sanitary Inspector took 12 samples of Scotch whiskey from different publicans in the district. Ten of them turned out to be up to the required standard, but two of them, and, strange to say, from two of the most respectable and best conducted licensed houses in the Borough, were found to be below the required standard. This was, no doubt, attributable to some oversight or mistake on the part of the proprietors, and not to any wilful intention. — Mr. Humphrey then proved the purchase of half a pint of whiskey in each case, portions of which were given to the proprietors, and part sent to Dr. Stevenson, the public analyst. Certificates were put in to show that the sample purchased from Mr. Hamnett was 2 per cent. below, and that from Mr. Laker 4½ per cent. below the standard required by the Act. — For the defence, in Mr. Laker's case, Mr. Nightingale said that Mr. Laker had been in the habit of purchasing whiskey 3 per cent. overproof, and he had lately been advised by his spirit merchant to have it of a different strength. He had recently had a quarter cask in, which his cellarman tapped without his knowledge, a gallon of which was sent over to the railway refreshment rooms un-

known to him. The Inspector happened to purchase the sample from the refreshment rooms that very day. Mr. Laker had assured him that it was entirely owing to the cellarman that the mistake was made. In Mr. Hamnett's case, when the sample was purchased from the hotel tap it was taken from a gallon jar, and there was barely enough left to supply the half-pint asked for. It was well known that in course of time the strength of spirits was much interfered with by evaporation, especially, as in this case, the jar was not hermetically sealed. There was no intention on the part of Mr. Hamnett to defraud the public, and he (Mr. Nightingale) would ask the Bench to dismiss the summons.—The Bench inflicted a fine of 10s. and costs in both cases.

A WHISKEY APPEAL.

In the Queen's Bench Division of the High Court of Justice, on May 19, before Mr. Justice Day and Mr. Justice Lawrance, sitting as a Divisional Court, the case of *Smith v. Jeffreys* came on for hearing.—Mr. G. A. Scott appeared for the appellant; Mr. Foote represented the respondent.

Mr. Scott said this was an appeal by way of a case stated by the Justices of Chippenham, and raised a point under the Sale of Food and Drugs Act of 1875. The question was whether any offence was committed under Section 6 of the Act, which said: "No person shall sell, to the prejudice of the purchaser, any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser." The point in the case was whether, upon the sale of whiskey which turned out to be 35 per cent. under proof, an offence was committed under that section when the whiskey was shown, by the evidence in the case, to have been deteriorated, not by the addition of water, but by the evaporation of the spirit from the whiskey. The facts were these. The respondent kept the refreshment rooms at the Great Western station at Chippenham, and had, as such, for the purposes of her business, a cask of Irish whiskey. A purchase was made by the appellant, who was an inspector under the Act, and the whiskey was shown to be 35.68 degrees under proof. The respondent did not question the purchase or the analysis, but called witnesses to show that no water had been added to the whiskey, that it had not been adulterated by the admixture of water or otherwise, and that the reduction of strength of the whiskey was not by reason of any cognisant or permissive act of adulteration on the part of the respondent or her servants. It was further shown that it was due to natural causes, only that the whiskey was found to be of lower strength than that prescribed by the Act. It was shown that in August, 1895, a cask of Irish whiskey, containing about 14 gallons, was sent to the plaintiff's place of business at Chippenham, the whiskey being 23 degrees under proof, this being two degrees above the strength referred to in Section 6 of the Food and Drugs Act of 1879. There had been no admixture or addition of water from the time of the whiskey being received until this sale to the appellant. The consumption of Irish whiskey being very small the cask in question had not been emptied in December, 1896. Then the respondent's manageress, finding the cask almost empty, drew off what was left in it, and allowed the spirit to stand for a short time in a basin to settle. She then poured what was clear into a decanter, and threw away the residue. It was from this decanter that the whiskey sold was taken. There was at the time a fresh cask of Irish whiskey in the refreshment rooms which had been sent in on the previous month, but this was not drawn on. It was contended for the respondent that evaporation from natural causes had reduced the whiskey from the strength at which it was sent out in

August, 1895, to the strength at which it was found in December, 1896, and an Inland Revenue officer who was called as a witness said the Excise authorities expected to find, and would be prepared to make allowance to quite so great an extent for loss from evaporation under such circumstances as in the present case. The magistrates found that the offence charged in the summons—that of adding water—had not been proved, and dismissed the case.

Mr. Foote, interposing, said the summons did not follow Section 6 of the Act of 1879, because it charged the respondent with having added water to the whiskey, and that the Magistrates had negatived. In fact, with the evidence before them, it was impossible to convict under this summons.

Mr. Justice Day: The magistrates seem to have taken a very commonsense view of the case.

Mr. Scott: The Act says nothing about adding water.

Mr. Justice Day: No; but the summons does. (Laughter.)

Mr. Scott: But the whole facts were gone into, and the respondent knew what case she had to meet.

Mr. Justice Day: The summons charges the respondent with adding water, but it was shown to the satisfaction of the magistrates that she added no water, and that no one else had done so.

Mr. Scott: That is only a technical defect in the summons, and no injustice would have arisen if the case had been adjourned.

Mr. Justice Day: I do not understand what you mean by a technical defect in the summons. The offence charged by the summons was adding water to the whiskey, and the magistrates found that there was no added water.

Mr. Scott said the summons charged defendant with unlawfully selling, by her servants, a pint of whiskey which was 35.68 degrees under proof. That alleged an offence under the Act.

Mr. Justice Day: But the summons charges something else.

Mr. Scott said that was so, that the summons charged respondent with adding water, but that was superfluous, and was not necessary in order to constitute the offence charged.

Mr. Justice Day: But it is the offence charged, and they have negatived it. The adding of the water is the whole gist of the offence charged. I am sure Parliament never intended to impose penalties on a person for selling spirit which had become below the required standard in consequence of evaporation.

Mr. Foote: The summons does not say that the whiskey supplied was to the prejudice of the purchaser and not of the nature, substance, and quality asked for. It only charges the adding of water.

Mr. Justice Lawrance: Perhaps the inspector would have found here that he had got a good old whiskey if he had only the sense to hold his tongue.

Mr. Scott argued that as it was shown this whiskey was 35 deg. below proof the magistrates ought to have convicted.

Mr. Foote was not called on.

Mr. Justice Day said the justices had decided this case just as any persons of intelligence might have been expected to decide it on the evidence before them. The respondent was charged with selling whiskey under strength after diluting it with water. This was the express charge. The magistrates having heard the witnesses found that no water had been added to the whiskey, and that the larger amount of water found was due to the evaporation of the spirit. The conclusion was not only a sensible one, but one which was warranted by the facts, and the appeal must be dismissed with costs.

Mr. Justice Lawrance concurred.

Appeal dismissed accordingly with costs.

MEAT.

ON May 13, Arthur Lund, a butcher, aged 22, of Bolton-road, Bradford, was fined 40s. and costs for exposing unsound meat for sale. It was stated the animal had suffered from tuberculosis, and was altogether unfit for human food. When questioned, defendant said he had paid only £6 10s. for the beast when alive, whereas a sound animal would be worth about £12. It was stated also that a portion of the beef had been sold. In defence, Lund said the farmer from whom he purchased the animal represented it as sound, and added that it was the first animal he had bought alive. The Stipendiary said he might have poisoned the whole parish had the meat not been detected.

AT Birkenhead, on May 14, Messrs. Ennitt and Coonan, Woodside Lairages, were summoned for depositing for sale two sides of beef which were diseased. Mr. Fearnley, Deputy Town Clerk, prosecuted, and Mr. Madden (instructed by G. J. Lynskey) defended. There was no dispute as to the meat being diseased, but the question was whether it was deposited for sale. It was found, newly-killed and warm, hanging in the slaughterhouse, where defendants' foreman ordered the men to leave it till Inspector Wagstaffe saw it. It was admitted that there was no other place to hang it, and that the pleura was stripped, so that the inspector could see at once something was doubtful about the beef. There was no offer to sell the beast, and no one at the lairage who could have sold it until one of the defendants returned.—The magistrates inflicted a fine of 40s. and costs, and Mr. Madden gave notice of his intention to appeal.

IN Edinburgh City Police Court on May 18, Sheriff Orphcot on the Bench, John Laurie, Pinkie-road, Musselburgh, was charged with an offence under the Edinburgh Municipal and Police (Amendment) Act, 1891, particularly sections 20 and 23, in so far as, upon May 3, the carcase of a bullock belonging to him, weighing 354 lbs., which was diseased, unsound, unwholesome, and unfit for human consumption, and intended for human consumption, was being conveyed for sale in Lauriston-street, Edinburgh. The carcase was seized on that day by a sanitary inspector, and on the 8th inst. it was condemned by the Judge of Police, on the inspector's report, and ordered to be destroyed.—Laurie pleaded guilty.—The Prosecutor stated that the carcase was in a state of decomposition when seized. An agent for the accused made an explanation to the effect that, through Laurie being ill at the time, he could not supervise his business aright, and the carcase had been sent in to Edinburgh without his knowledge.—The Sheriff said there was a large quantity of diseased meat in that case, unfortunately, intended for human consumption, and that circumstance gave the case a gravity that it would not otherwise possess. The maximum penalty was £20, or imprisonment without the option of a fine for three months. This being a first offence, the penalty would be moderated to £10, with the alternative of 30 days' imprisonment.

AT the Eastbourne Petty Sessions, on May 21, Henry Mandy Simmons, butcher, was summoned, at the instance of the Sanitary Committee, for exposing a quantity of meat which was unsound in a shop in Seaside, on Thursday in Easter week. The Town Clerk (Mr. H. W. Fovargue) prosecuted and Mr. W. T. Ricketts, who represented the London Butchers' Trade Association, of which defendant is a member, defended.

William Edward Mitchener, inspector of nuisances, stated that he visited defendant's shop at 11.30 on the day mentioned, and Peter Errey was in charge. He saw two pieces of pork, and two pieces of mutton, which were unsound, lying amongst other pieces which were exposed for sale on the front slab. In the centre of the

shop were two pieces of beef, and hanging on a rail at the back of the shop were eleven pieces of mutton with some sound pieces. On a bench was a sheep's head, unsound, amongst a number of others, and also a piece of pork unsound on the same bench. There was nothing to show that the meat mentioned was abandoned. Witness told Errey he considered the meat unsound, and placed the meat enumerated on one side. Witness said: "I should like you to notice where I took the meat from." The meat was putrid green, and in a stinking condition. It was taken to the Town Hall, and while waiting for Dr. Willoughby, Errey came and said he was advised by the manager to attend and cut open a piece of beef so as to ascertain whether it was sound or not. He suggested that Errey should wait until Dr. Willoughby arrived. This he did, but Errey never asked that the meat should be cut open. Dr. Willoughby condemned the meat, which was shown to a Magistrate (Mr. H. D. Farnell), who gave the order of condemnation.

By the Magistrates' Clerk: If the meat was putrid and green outside it could not be good inside.

Cross-examined: With the exception of the Saturday the establishment was practically closed for three days. He had had eight or nine years in butchering in Brighton and London meat markets.

You don't mean to suggest the mutton was green?—Witness: It was.

That only arises in hot weather?—And from long keeping.

In cold weather?—Yes. The meat was not dry; it was in a slimy condition.

Did you go to any other shop that morning?—No.

How was it you were so attentive to Mr. Simmons, whose shop was closed for three days?—That was the only one I went to. There was not sufficient time to go anywhere else, and it would have got wind all over the town. (Laughter.)

You expected other people would have bad meat on their premises?—No.

Did you go into any shop the next day?—No. I made my occasional inspection.

In reply to the Town Clerk, witness said he had no intention of entering defendant's premises until he saw the condition of some meat when passing, and noticed the stench arising.

Dr. Willoughby, Medical Officer of Health, said all the meat was unsound and injurious to health. It was green and putrified.

By the Magistrates' Clerk: It would not be possible to eat any of the interior after trimming the pieces.

Witness said the manager did not repeat his request to have the meat cut. Had such a request been made it would have been granted, or the manager could have asked the magistrate not to destroy the meat.

For the defence, Mr. Ricketts pointed out that Mr. Simmons always bore the character of a highly respectable tradesman, and this was the first time there had been an attack on his trading reputation. Mr. Simmons had a number of establishments in the town, and these he had to leave to the trustworthiness and fidelity of those in charge, who had strict orders to remove any discoloured meat. There had been no complaint for the past thirty years.

The Town Clerk, interposing, objected to this statement.

Mr. Ricketts remarked that there was such a thing as stabbing a man in the dark. In common justice and fair play such an observation should not have been made, especially as defendant had never had an opportunity of defending himself. It was a most unfair and un-English proceeding. Mr. Simmons was not aware of any previous complaint. The meat on the back bench was not exposed for sale.

The Chairman said the Bench held that any meat in the shop which a customer could see was an exposure for sale.

Mr. Ricketts : I don't think you will hold that.

The Chairman : Well, we always hold it in this Court.

Peter Errey, who said he was manager for Mr. Simmons, was next called. The pork was perfectly sweet, although a little discoloured, and with regard to the Scotch beef this had become discoloured through having been in the ice-room. This meat was not green. The meat at the back of the shop was not exposed for sale. All meat for the other shops was sent to the establishment in Seaside for witness to ascertain whether it was good. There was no place or receptacle behind the shop, and the meat had to be placed on the bench at the rear until the rag and bone man arrived to take the pieces away. He, however, had not called that day.

A man named Morris, rag and bone collector, was called to prove that he collected the refuse joints, and that he called on the Tuesday, but not until after the Inspector had called.

After a short deliberation in private, the Chairman said : This is the worst case of the kind that has ever come before us, and although defendant, who was absent when the offence was committed, may possibly not take the moral blame, the legal responsibility falls upon him. The circumstances are very serious, and are made more so by the admission of the manager, who has the control of the particular shop, that he has been accustomed to sell to the public meat in the same condition as that which the Medical Officer of Health, the Inspector, and the Magistrate who saw this particular meat, and who is a surgeon, condemned as absolutely unfit. The meat seems to be sent to this particular shop, and it is in the shop and consequently may be held to be exposed for sale—meat which is notoriously unsound, although it is only called for in the afternoon by the man to whom it is always handed over as being notoriously unsound. The aggregate amount of punishment which it would be in our power to inflict would amount to some hundreds of pounds, but we don't wish to impose any unfair punishment, but, looking at the gravity of the case, we feel we cannot inflict a less punishment than £20 and costs (£1 13s. 6d.).

At Guildhall, London, on May 19, Ernest Mounce, of Tinhay, Lifton, Tavistock, Devon, was summoned, at the instance of the Commissioners of Sewers, for sending the carcase, head, pluck, tail, and four feet of a calf, which was diseased, to the Central Meat Market, intending them for sale as human food.—Mr. Vickery prosecuted, and Mr. Ricketts defended.—It appeared that defendant was a machinist, and was in the habit of travelling about with a thrashing machine. He came across this calf, which he bought for store purposes. It, however, had a crooked neck and some ingrowth, which rendered it practically useless. He therefore had it killed, and though there was a market in the town, he decided to send it to London, marking it first-class meat. It was seized in the London market by Inspector Leeson, who found that it was totally unfit for human food. It was in a very wet and emaciated condition. The kidneys, ribs, etc., were badly inflamed, showing disease, thus rendering it unfit for human consumption. Any person with even a slight knowledge of meat could have seen that it was totally unfit for food.—Evidence was called for the defence with a view of showing that the defendant was of the opinion that the meat was good.—Mr. Alderman Davies, M.P., said it was a bad case. The full penalty was £50, but still, he did not think it was one that called for that. He should fine him £25 and £5 5s. costs. There were many persons in the country who thought that the London salesmen were such idiots that they could pass any such poisonous stuff upon them.

BUTTER.

At Haslingden, Patrick Ryan, 30, Canning-street, Accrington, provision dealer, was charged in two cases with exposing for sale on Haslingden Market ground, margarine, the label of which was not clearly visible to the purchaser.—Mr. J. L. Whitaker prosecuted, and Mr. Sandeman defended.—Inspector Berry said on the evening of the 13th he passed defendant's stall, and saw thereon four parcels of margarine, and although he looked particularly could see no label.—Sergt. Tyndale, who followed the previous witness to the stall, said he looked expressly for the labels, but could not see any. He then purchased a pound of the commodity in one parcel, marked 8d. per lb., and another pound at 5d. He then said he had bought it as butter for analysis. Defendant said it was margarine, and on witness saying it was not labelled so pointed to a label in yellow letters along the bottom of the 8d. parcel, and to a similar label on at 5d. The latter label, however, was hidden behind the first-mentioned parcel. The first label was covered with thin linen, and the letters were not distinguishable in the gaslight, as they rested against the margarine.—Defendant said he had used the same labels ever since the Act came in force. The muslin was over the margarine to keep the dust off.—By Mr. Whitaker : He commenced to use yellow labels because he saw others using them, and thought they were clean looking, and partly because it was nearly the colour of the margarine. He did not use black letters because black was mourning, and he did not like putting margarine into mourning.—Fined 10s. and costs in each case.

At Hamilton, on May 18, before Sheriff Davidson, at the instance of Mr. Dobson, sanitary inspector, for whom Mr. John Wilson, writer, appeared, John Graham, grocer, Cambuslang, was convicted of having, on March 22, exposed for sale a parcel of margarine without having a label attached, and with having delivered the same without the necessary printed wrapper. It appeared the sale was made by a boy of 15, who was in charge of the shop at the time.—The Sheriff imposed a fine of £2 10s. including expenses.—William Grant, grocer, Main-street, Cambuslang, for, on the same date, having sold a parcel of margarine without having a label attached, was mulcted in a similar penalty.—Alex. Begg, grocer, Cambuslang, was found guilty of having, on the same date, exposed for sale a parcel of margarine without a label attached, and with having delivered the sample purchased without the necessary printed wrapper. The shopman who supplied the parcel was brought up under a supplementary complaint at Mr. Begg's instance, and the Sheriff, being satisfied that the infringement of the Act was due to the assistant, imposed upon him the modified penalty of £1 10s. There were two other complaints, one of which was withdrawn, and as regards the other the charge was found not proven.

At Kensington, on May 11, Edward Walker, of 206, Uxbridge-road, Shepherd's-bush, was summoned by the Hammersmith Vestry for selling as butter an article which was not of the substance and nature demanded ; for exposing it for sale not duly marked as margarine, and also for serving the article in a wrapper not notifying the nature of the article. Inspector Oatley stated that on the 13th ult. he visited the premises of defendant and asked for a pound of 10d. butter. He was served by an assistant from what appeared to be butter marked "10d." Nothing was said about the nature of the article at the time of the purchase. Fined 20s. and costs in the first case, and 5s. in each of the other two cases.

At West Ham, on May 12, Henry Bailey, of 14, Terrace-road, Upton Park, and David Nash, of 102, Vicarage-lane, West Ham, were severally summoned for selling butter not of the nature, substance, and

quality demanded.—The summonses were taken out at the instance of Dr. C. Sanders, the medical officer of health, and the defendants were each fined £2 and the costs.

At Stratford-on-Avon, on May 20, Thomas Wesson, grocer, Windsor-street, was summoned, at the instance of Mr. G. Bennett, inspector, for offering for sale margarine which purported to be butter. Defendant was further charged with refusing to supply the inspector with the substance for the purpose of analysis.—Mr. Bennett said he visited defendant's shop on April 29, and saw a dish of a substance resembling butter. It was marked "Our price, 1s." Witness asked to be supplied with half-a-pound of salt butter, and defendant said they had none. On witness pointing to the substance on the counter, defendant said, "That's not butter, it's fat; we don't sell it as butter." Defendant refused to let him have any, remarking that he wanted it for his regular customers, but after witness had left the shop defendant went after him and told him he might have what he asked for.—Defendant now said he was under the impression that he was not obliged to supply Mr. Bennett with any article other than that asked for, which was salt butter.—In fining Wesson £2 and costs, the Mayor remarked that the defendant had been imposing upon the poor people among whom he traded by charging 1s. per lb. for an article that was barely worth 8d.

BEEWAX.

At Birmingham, on May 21, Alfred Redshaw, chemist, 97, Saltley-road, was summoned for selling beeswax containing 25 per cent. of paraffin wax and 3 per cent. of resin.—The defendant said the wax was not sold by him for medicinal purposes.—Mr. Parker, of the Health Department, said the Health Committee had this view of the case before them, but they decided that the facts should be submitted to the magistrates. Had the defendant been a drysalter he would probably not have been summoned.—As this was the first case of the kind, and as the defendant did not dispense medicine, a fine of 1s. and costs was imposed.

OLIVE OIL.

EDWIN REDGROVE, oilman, of 151, Clapham Park-road, London, was summoned, last week, for selling olive oil adulterated with 45 per cent. of sesame oil. He said he did not know the oil was different from the proper salad oil. Very few customers asked for pure olive oil. The magistrate fined him 40s. and 12s. 6d. costs.

MILK—AND HOW TO SELL IT.

(Continued from page 250.)

LEGISLATION AFFECTING THE TRADE.

Now I come to my third head, under which are some of the considerations arising out of legislation affecting the trade. During the last twenty-five years a great deal of legislation has been passed, and rightly too, affecting the dairy trade, and an amount of official supervision has been established. Glasgow will be for ever indebted to Professor Gairdner, the late Dr. Andrew Feigus, Dr Russell, and the late Mr. Kenneth M. M'Leod, together with the ex-Lord Provosts John Ure, Sir William Collins, Sir James King, and the various Health Committees of our municipality who have brought about these reforms. The West End epidemic of 1877-1878, which will ever be remembered in our trade, was peculiarly severe, some 600 families having been affected by it. Experts traced it to an impure milk supply, and the neglect of the most rudimentary laws of cleanliness and health. The revelations made were of a most startling description, and, out of the alarm they evoked in the public mind, steps were taken by some of the leading citizens

to try to prevent the like from occurring again. First of all, a Legislative Committee was appointed, with Sheriff Spens at its head, along with Mr. Robert H. Leadbetter and several other gentlemen; and after consultations with the then Lord Advocate and the Health Committee of the city, a Bill was drafted, the provisions of which have been the basis of all subsequent local sanitary legislation affecting the sale of milk. The old-fashioned dairy with its byres and pigsties has been almost entirely abolished in Glasgow, and the small dairy attached to the dwelling-house, where many a fever patient lay under the care of well-meaning friends, never thinking of the transmission of disease and death, has also been improved out of existence. The action of governing bodies and of private enterprise in these respects was for long far ahead of the general public knowledge and opinion on the sanitary aspects of milk. They are ahead of them yet. This indisposition on the part of the general public to believe or to remember sufficiently the dangers of squalor and dirt in connection with milk has made it imperative that legislation should be adopted, so that certain conditions dictated by sanitary science, and involving extra labour, care, and expenditure, should at least be incumbent upon all engaged in the milk trade. And I truly wish that our County Councils, all over Scotland at least, were as exacting as Dr. Russell, Dr. Chalmers, Mr. Fyfe, and the Health Committees of Glasgow are and have been.

Every respectable dairyman is more than satisfied to know of the existence, the work, and powers invested in the Health Committee, and the invaluable work of Dr. Russell, Dr. Chalmers, Mr. Fyfe, and their staff. Among no other class of the community is their invaluable work more intelligently appreciated; indeed, at this point I feel tempted to interpose a remark or two upon this subject, and to quote the words of our worthy chairman, Bailie James Dick, last year on this platform: "That the most cordial relations between the dairy trade and the officials acting under the health and sanitary authorities are the right and natural relations which should exist at all times." I hold that a great mistake would be made by either party regarding the other with suspicion and dislike, a thing which may be quite natural between a criminal class of the community and the officers of detection and justice, but entirely out of place in the true relations subsisting between the dairy trade and the Health Committee. Every intelligent man has a right to his opinions, and to speak them out plainly, clearly, and fearlessly, yet politely, giving or meaning no offence. The classes and masses are being better educated, not only in our schools and colleges, but by the daily press and journals connected with every trade and profession; and it would be a pity if those engaged in the dairy trade were forced or coerced to conduct their business on hair-splitting lines, or to please the whim of men who know little or nothing of the practical points of a business whose ramifications are so multitudinous. I shall assume, then, that confidence and respect, are to characterise the relations between them, and, if this be so, it is safe to say that the inspector's visits will at all times be welcome. Let the relations of the authorities to the trade be understood to be *not* those of a hostile, suspicious, and detective character, as some dairymen and butchers describe them, springing carefully planned surprises and prosecutions on the unsuspecting victim, but rather the relations of an auxiliary, of a helpful and confidential character, and a greater benefit than ever may yet be conferred upon the community. The officers of the sanitary department are not paid from fines and prosecutions, so that they have nothing to gain by forcing on actions in Court. They have only one duty to perform, and that is to see, so far as our trade is concerned, that we are acting honestly with the public.

(To be continued.)

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Food & Sanitation

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Food and Sanitation.

SATURDAY, JUNE 5TH, 1897.

THE "DAILY CHRONICLE" ON THE AMERICAN OIL GANG AND THE FLASH POINT.

THE *Star*, the *Daily Chronicle*, and *Reynolds' Newspaper* having spoken out with necessary directness upon the flash point question, we have every hope that the efforts of certain Rt. Honourables and Sirs in official positions

for their dear friends, the American oil gang, will be frustrated. We do not pretend to explain how it is that the Right Hon. Anthony J. Mundella finds it consistent with his position as chairman of a Parliamentary enquiry to "burke" every question which tells against the Standard Oil Company and its methods, nor can we explain how it happened that the most unblushing scientific liars from America and elsewhere were shielded from exposure. We thought that the Right Hon. Anthony J. Mundella was an ex-Cabinet Minister, and not the slave or tool of a gang of contrivers of arson and murder who instead of being allowed to send hirelings to lie before a House of Commons Committee ought to be expiating their villainies in penal servitude. For his own sake, we trust Mr. Mundella will never adorn another Parliamentary enquiry. This is what the *Daily Chronicle* says of him, his friends, and the murderous 73° F. Abel flash point:—

"It will be remembered that we long since expressed in these columns a very strong opinion as to the low-grade petroleum juggle as to which the *Star* has been piling up for many days a careful and very grave indictment. We have not the smallest hesitation in saying, as we suggested originally, that the toleration of the existing low 'flash-point' of 73 deg. is not only a blunder, but a scandal. Men like Lord Kelvin and Sir H. Roscoe, not to quote other testimony, have declared that to admit for common use in this country oil of that grade is to court grave accidents and loss of life. The Government, though it admits this perilous stuff for use in the homes of the unsuspecting and uninformed poor, will not allow anything to be used in its own barracks and other institutions under 105 deg., and sometimes insists on a safety test as high as 120 deg. To pass anything less than 100 deg. as really safe for common use, as such oils are and will be used among the poor, is in truth flat insanity. Why, then, is it allowed? the simple citizen will ask. The reason is because it suits the most powerful and the most unscrupulous of the American 'Trusts.' The name of the 'Standard Oil' is well known to all men, by hearsay. Most people have also heard of Mr. John D. Rockefeller, who is its astute chief. But few, except those who have some inside knowledge of things American, realise at all what such a 'trust' is, or what it does. It is, in short, a monopoly of the oil trade, which has murdered all competition in the States, and is anxious to kill any rivals elsewhere, and has not the smallest glimmering of conscience as to how it does it. In spite of its power, most of the American States forbid any of this low-grade oil to be sold for such use at home. Therefore the trust, by its many tools and dependents, cajoles us into opening our doors to it. So, in effect, the Standard Oil palms off on us at vast profit the refuse which is unmarketable in its own country. Thereby, as it conveniently happens, it goes far to ruin a competing trade in Scotland. It adds to the effect by raising a cry that all the mischief is in the lamp; and while we spend years in discussing this, the unsafe oil flows on. The immediate point is that a dilatory Select Committee is supposed to be inquiring, and cannot be persuaded to report. Will not someone who objects to the frequent holocausts that this evil traffic causes, drive this indictment home?"

Well, the *Star* has driven it home; but in an enquiry such as this one by a Select Committee every particle of evidence should have been on oath, and the witnesses have known that prosecutions for perjury would be promptly taken. No Chairman should be allowed to "burke" inconvenient questions. However, in spite of all the influence of the millionaire murderers, backed by *The Times* of "Flora" and "Pigott" renown, we think truth will prevail, that we have won our fight, and the flash-point will be raised to at least 100° F., and we congratulate the journals named for helping us to make known the real question at issue.

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THE NEW FRENCH MARGARINE LAW.

THE French journal *L'Epicier* says:—"As the new law interdicts formally the sale of butter concurrently with margarine, those of our readers who have not yet done so must immediately decide for the one or the other of these products." If dealers elect to sell butter it is absolutely interdicted to them not only to sell, but even to have in their possession, a small quantity of margarine, even if it be for their own personal consumption; and they are told to observe that the designation margarine applies hereafter to all products which, not being butter, have any resemblance to it and can be applied to the same usages. If, on the other hand, the dealers decide to sell margarine, they can sell under that name all substitutes for butter, but they must watch that these products do not contain any colouring matter; and, moreover, must display on their warehouses an external sign, bearing in plain characters, at least thirty centimetres high, the words "depôt" or "débit de margarine." Beyond this all blocks of margarine must be of cubic form, and bear an impression of the word margarine. This word must also be inscribed in plain and indelible characters on the wrappers, with the name and address of the vendor. *L'Epicier* points out that the minimum penalty for a conviction under this Act is six days' imprisonment and 100 frs. fine, and the penalty may be as high as three months' imprisonment and 5,000 frs. fine.

COCOA.

At Birmingham, on May 21, George Keen, Ledsam-street, was fined for selling cocoa containing 40 per cent. of sugar and 10 per cent. of sago starch. The defendant said the "cocoa" was really a mixture, and should have been labelled as such, but, through an omission, the packets were not labelled. Mr. Parker said the makers provided labels for labelling the mixture, but shopkeepers would not use them. A fine of 40s. and costs was imposed.—Smith Bros., Monument-road, were fined 20s. and costs for a similar offence.

SANITATION IN MARYLEBONE.

"ONE hundred and fifty persons complained of having had to write to the Vestry several times"—with reference to the non-removal of house refuse—"and there were many complaints of dustmen demanding money." So says an official report on the state of things prevailing in Marylebone. The County Council, whose officers brought these facts to light, insists upon local authorities making a house-to-house collection once a week. As the Marylebone Vestry has dis-

charged injunctions to this effect, the Council will seek the Local Government Board's authority to take proceedings.

MILK.

At Bradford on May 13, Harry Rhodes, farmer, of Cutler Heights, was summoned for selling adulterated milk.—Mr. J. Duce, of Shipley, Inspector under the Food and Drugs Act for the West Riding County Council, prosecuted. It appeared that the inspector visited the defendant whilst the latter was selling the milk to a milkman. The sample which he purchased contained 22 per cent. of added water. Mr. M. Banks Newell pleaded for lenient treatment of the defendant, and said that it was his first offence. A fine of £1 and £1 18s. 6d. costs was imposed.

At Northfleet Petty Sessions, John Acton Baldwin, was summoned for selling a quantity of milk from which cream had been abstracted, contrary to the Food and Drugs Act, on April 20.—Mr. Clinch appeared for the defendant and for Mr. J. Brann, who had supplied the milk originally.—P.C. Andrews proved purchasing a pint and a-half of milk from the defendant, who was retailing it from a cart in Rosherville. He informed the defendant why he had purchased the milk.—Superintendent Lacy deposed to receiving a pint and a-half of milk purchased by the last witness from the defendant. He divided the milk into three parts, one of which he sent to Dr. Adams, county analyst, who had given a certificate showing that the sample contained 77 parts whole milk and 23 parts of milk deprived of its cream.—Mr. Clinch thought he should be perfectly justified in submitting that no evidence had been given in support of the charge. It was necessary, under the Food and Drugs Act, to show that the cream had been abstracted, and, secondly, that the milk was sold with intent to defraud the buyer. There was no evidence before the Bench that Mr. Baldwin had abstracted any part of the cream, and nothing had been done to show that the article was prejudicial to the purchaser. He asked that the verdict should be in favour of the defendant. He alluded to other cases where milk had been short of cream through carelessness on the part of the purveyor, who had failed to stir it every time he doled it out in pints or half-pints to his customers. According to his instructions, care had been taken to keep the milk well stirred.—George Barden, foreman to Mr. J. Brann, at Chalk, said he was present when the cows were milked on the 20th ult., between five and six a.m. The milk which reached defendant was put into a large churn. Before he got to Mr. Baldwin he sold about 12 gallons. He subsequently sold the other to Mr. Baldwin. He had previously mixed the whole of the milk, and no cream was abstracted.—By the Bench: The milk is not tested when it leaves Mr. Brann's dairy.—Frederick Clark, assistant to Mr. Baldwin, deposed seeing five gallons of milk brought by Mr. Barden at 10.30. At one o'clock the milk was taken out, and until they had met the officer none of the cream had been abstracted. When they served the milk out to customers it was stirred up, so as to keep the cream mixed.—The chairman intimated that there would be a conviction, and was proceeding to discuss the amount of the fine with his colleague (Mr. Fergusson), when Mr. Clinch said he was prepared to have the sample, which still remained with the police, analysed at Somerset House. He urged that the evidence was not sufficiently convicting. It was a matter of very great importance to his clients.—The Chairman: We have no evidence as to the state of the milk when it left Chalk.—The Clerk: Oh, yes; Barden saw the cows milked.—Mr. Clinch asked that the Magistrates would, in view of that statement, reconsider their verdict.—The Bench again retired, but on resuming said they saw no reason to alter their ver-

dict, but thought that the reason of the absence of cream was due to carelessness on the part of the purveyor. There would be a fine of 5s. with costs.—Mr. Clinch asked that the sample in the hands of the police should be sent to Somerset House, and that the Magistrates would postpone their decision. If his client Baldwin was then in the wrong, they would pay the expenses. He pointed out that according to the analytical return of Dr. Adams the cream had not been abstracted.—The Chairman: There will be a conviction, and your application seems rather late.—Mr. Clinch submitted that the conviction could not stand, and intimated that he would appeal against the decision at the Quarter Sessions. The matter was of vital importance, and in placing it before the Bench he had been under the impression that he could not call the defendant, but this he found he could do, and asked to be allowed to call him.—The defendant, with the permission of the Bench, then went into the witness-box, and stated that at no time had anything been added to the milk, or had any of the cream been abstracted. He had stirred it on serving each customer.—The Magistrates again consulted, and the Clerk said the Bench would still convict, but they were satisfied that the milk had not been tampered with.

AT Paisley, on May 25, Jane Dow, or Kissen, dairy-keeper, 58, Main-street, Pollokshaws, was charged at the instance of Chief-Constable Harding with having, on April 28, sold to him 1½d. worth of sweet milk which contained 6 per cent., or thereby, of added water, and which was deficient in natural fat to the extent of 20 per cent.—She pleaded not guilty, but was convicted on evidence, and fined two guineas, including expenses, or three days' imprisonment.

AT Huddersfield, on May 28, Walter Hirst, farmer, Milnsbridge, was summoned for selling adulterated milk.—Mr. Field, Deputy Town Clerk, prosecuted, and stated that on April 30 the defendant, who kept cows, and was in business as a milk dealer, was met in Logwood-street, Lockwood, by Inspector Drake. The inspector asked for a pint of new milk, and a pint of milk was supplied, and he paid twopence for it. He offered to divide the milk into three parts, and he sent one to the borough analyst, who had given his certificate showing that there was 6·4 of "added water" in the milk.—Defendant said he was thoroughly opposed to such dealings as this, and it was quite a mystery to him how the milk had become adulterated. He desired to point out that the day was wet, and the milk he supplied Mr. Drake with was "at the bottom of the can." In fact he thought he had not enough to supply him at first. In reply to the Court the defendant said he kept his own cattle. Milk dealers sometimes bought milk from one another, but he did not buy any that morning. He did not wish to shift the blame on to anybody's shoulders.—In reply to the Court, Mr. Jarman, the borough analyst, stated that the natural quantity of water in milk was 88½ per cent.—Mr. Mills (the magistrates' clerk): Milk varies. What is the highest?—Mr. Jarman: That is natural milk.—Mr. Mills: But it varies.—Mr. Jarman: That is the quantity in poorish milk.—Mr. Jarman, replying to another question, said that the percentage of solids in the milk amounted to 10·37, whereas there ought not to have been less than 11½ per cent. In fifty samples he had analysed the average was 12½ per cent. of solids.—Defendant said that at this time of the year milk was of rather inferior quality, because they got to the bottom of the stack.—The Chairman: That is the question I was going to ask. Would the dry state of the pasture have any effect on the quality of the milk?—Mr. Jarman: The poorest milk in the year is in June.—But would the dry state of the pasture have any effect on the quality of the milk? It would not effect the quality, but it would the quantity.—Defendant said that the milk was always

poorest in the spring time, when they got to the bottom of the stack, and before the cattle were sent out to grass.—Replying to Mr. Field, Mr. Jarman said the percentage of non-fatty solids in the milk was 7·96.—Defendant was fined 20s. and the expenses.

THE ADULTERATION OF SUMACH.

A LETTER from the Chief Secretary of the Government of Cyprus, enclosing copies of a notice issued by the Cyprus Director of Agriculture drawing attention to the "large quantities" of adulterated sumach which, it is alleged, are consumed by English manufacturers, says: That the adulteration can only be detected by microscopic examination, and manufacturers are recommended to obtain the sumach they require in the shape of leaves, of which Cyprus produces large quantities, and can supply much more should the demand for them increase.

CLERKENWELL AND ITS ANALYST'S DUTIES.

MR. J. K. COLWELL, Public Analyst, has written the Vestry asking that the proposed bye-law, imposing upon the analyst the duty of analysing samples of water, may be reconsidered before confirmation, as that duty forms no part of the duty of a public analyst under the Sale of Food and Drugs Act, and was not a condition of his appointment.—There was a discussion on this, some members declaring that water is an important element in the food of man, and, therefore, should come within the scope of the public analyst; whilst others thought there was so much work attaching to the analysis of water that it should not be made the work of the analyst except for extra payment.—Mr. Horden thought the charge of four guineas for testing the quality of the water at Muswell-hill was too great; and it was owing to this that he had suggested it be put in the bye-law specifying the work of the analyst.—Mr. Millward considered the public analyst of Clerkenwell very well treated, and, therefore, should not complain at, say once or twice a year, being asked to analyse a sample of the water which the people drank.—It was decided to omit the analysis of water from Mr. Colwell's duties at his present rate of remuneration.

THE DANGERS OF SUMMER COOLERS.

THE ice-cream and cold-drink season is about to open. This fact was appropriately signalled last week by the Glasgow magistrate who fined a High-street hokey-pokey merchant £5 for sleeping in the apartment where he compounded his ices. That was an exemplary and well-deserved sentence. The quality of lime juice cordial, a constituent in many thirst-quenchers, was under notice at the same time in a Lancashire police court. The vendor of a bottle of this liquid, which had been found on analysis to contain 100 grains of salicylic acid, was asked what he had to say for himself. He blamed the manufacturer, who appeared with the explanation that lime juice must be fortified against fermentation, that salicylic acid is the best antiseptic available, and that he had erred on what seemed to him the safe side by putting a little too much into the cordial. It came out in this case that those useful people called experts declare that salicylic acid may be added up to 26½ per cent. of the cordial without deleterious effect. We should like to know how they arrive at that figure. For once in a way, however, the adulterator could not be charged with the introduction of a cheaper material, for the acid in this case is more expensive than the lime juice. But it is poor

consolation for the thirsty one, whose purchase contains more than 26½ per cent. of acid, to know that he is being poisoned quite regardless of expense.

THE POLICE AND WHISKEY.

In various parts of the country, and in various ways, the Food and Drugs Act has been badly treated ever since it became law. And the complaint we have too often had to make against the method of its administration is that it has hardly anywhere been used with sufficient freedom and frequency. The complaint which reaches us this week from the East Riding of Yorkshire, however, is a unique one. There, it seems, the police have submitted to the public analyst a fair number of samples, but nearly all the samples have been of one liquid—whiskey! Why this should be so it is difficult to imagine, unless it be that the police of the Riding find more personal gratification in taking samples of whiskey than in turning their attention to butter, coffee, sugar, and such substances. Mr. Appleton, one of the East Riding Councillors, says that this state of things is not new, and that "for nine years the General Purposes Committee have been trying to impress upon the inspectors of police the desirability of looking after something else than whiskey, but they seem to be incorrigible." This, certainly, is very much to be regretted, especially as it seems to show that the police have, from personal observation, come to the conclusion that the whiskey in the East Riding is more dangerous than any of the other "foods" which may be adulterated there. Still, it would be well if the police could be persuaded to take some notice of Mr. Appleton's assertion that "there is plenty of adulteration in the East Riding," though, naturally, they can hardly be expected to agree with his opinion that "the inspectors have no brains to detect it."—*County Council Times*.

A CORONER ON BEECHAM'S PILLS.

JOHN NORDON, 44, died on April 16 at Keighley, after taking seven Beecham's pills at a dose. At the inquest, Coroner Brown remarked that deceased evidently did not follow the injunction of the hymn-books reported to have been presented to a chapel at Southport, in which, at Christmas-time, the choir found one of the pieces to run:—

Hark! the herald angels sing,
Beecham's Pills are just the thing;
Peace on earth and mercy mild,
Two for an adult and one for a child.

After the medical evidence, the Coroner, addressing the jury, said no doubt they were of opinion that these pills might have had a slight irritant effect, but they would not kill the man. A verdict was returned that "The

deceased died suddenly after taking seven Beecham's pills; he died from natural causes—namely, heart disease."

ADULTERATION PROSECUTIONS AT DEAL AND WALMER.

At Deal Police-court, on May 20, Henry May, of the Saracen's Head, was fined 6s., with 9s. costs, for selling rum which was 1·95 degrees below the legal limit of strength.—Edward Smith, grocer, was summoned for selling butter containing 80 parts of foreign fat in an unlabelled wrapper, and cocoa containing 50 parts of starch and sugar. Fines amounting to £2 3s. were imposed.

ISLINGTON VESTRY AND THE SALE OF FOOD AND DRUGS.

A REPORT was received from the Public Health Committee, stating that, pursuant to Vestry reference of March 5, 1897, it has had under consideration the Sale of Food and Drugs Bill now awaiting the approval of Parliament, by which it is proposed to consolidate and amend the laws relating to the sale of food and drugs, and, in connection therewith, a report of the Vestry's Analyst thereon (a copy of which has been forwarded, that it approves the provisions of the Bill subject to the following modifications or amendments made therein:—That in Clause 17, the label should intimate to the purchaser the proportions of ingredients. That it agrees with the report of the analyst, with the exception of his expression of opinion that an invoice should not be constituted a warranty; and recommending that copies of the analyst's report, together with an expression of the views of the Vestry, be forwarded to the Local Government Board and to the members of Parliament representing each of the divisions of Islington.

Mr. Cufflin moved, and Mr. Ansell seconded, the adoption of the report.

Mr. J. Williams, on moving as an amendment that the report be referred back to the Public Health Committee, said the suggested alterations were impracticable so far as the sale of coffee and chicory were concerned.

Mr. Harding seconded, and amidst considerable laughter gave it as his opinion that it would be impossible to give accurately the percentage of water in butter.

Mr. Cameron, as a tradesman, hoped that the motion would be carried, as he thought it was part of the Vestry's duty to see that the people got good food. It was deplorable to see two tradesmen, one who advocated that chicory should be charged the same as coffee—

"KURRUWA"

(This word is Registered, and used as a Trade Mark for Best Quality Articles only, and has now become synonymous with quality for the following specialities.)
"We are of opinion that all the products bearing the guarantee of this name may with equal justice receive our highest commendation."—*The Family Doctor*.

"KURRUWA" DELICIOUS, SOLUBLE COCOA.

Manufactured in England on the popular Dutch principle.
ANALYTICAL REPORTS.

"The Laboratory, Bow and Bromley Institute, London, E.
"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average.

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,
"Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London;
"Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 1-lb. 8d., 1/4, 1-lb., 2/8.
This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

Please ask your GROCER or CONFECTIONER for these specialities, see that they are marked "KURRUWA," and, if you cannot obtain them, write direct to
THE "KURRUWA" ASSOCIATION, 2 and 3, IDOL LANE, LONDON, E.O

"KURRUWA" CHOCOLATE ALMONDS.

"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*.

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

Mr. Williams: I said nothing of the kind. (Uproar.)

Mr. Cameron: And another member who advocated that ratepayers should pay 1s. 6d. a pound for water and butter. (Laughter.)

Mr. Harding: I never said that. I protest against such a statement. ("Order, order.")

Mr. Cameron: These are the Moderate members who put in their election addresses, "Healthy homes and pure food." (Laughter.) I am surprised at the hypocrisy of these men—

Mr. Williams: How about the slate in coal? How many pails of water do you put on your coals? (Uproar.)

Mr. Cameron was unable to proceed, his voice being drowned by continued cries of "Question."

Mr. Stonelake spoke in favour of the report.

Mr. Price said the question was an important one. It meant more than appeared in the report; there was a great principle underlying it, and he was sorry to see opposition coming from persons interested in the amendments.

Mr. Steward, having regretted that Mr. Cameron should have made a speech tempered with party feeling, said no tradesman, if he were honest, need be afraid of the suggested amendments.

Mr. Cuffin admitted there were difficulties in the suggested amendments, but he pointed out that if a label said that the article sold was, for instance, a mixture of coal and slack, coffee and chicory, or butter and margarine, and did not define the quantities, it was useless.

The report was agreed to.

CHESHIRE FARMERS AND THE SALE OF MILK.

At a meeting of the Cheshire Chamber of Agriculture, held at Crewe, on May 24, a discussion took place upon the methods adopted in the prosecution of milk-sellers who were suspected of adulterating their milk, and it was described as unfair to the farmer that samples of milk should be taken and analysed long after the milk in bulk had left their premises.—Mr. Caldwell proposed that the samples should be taken from the sending station instead of on arrival at Liverpool, Manchester, and other large towns.—Mr. Hocknell (Nantwich) seconded the motion, which was carried.—Mr. T. Baxter (Frodsham) proposed that, in the case of farmers sending milk into the towns, before any prosecution was instituted, the milk should be traced to its source, and samples taken on the farmers' premises.—Mr. J. Corbett (Nantwich) seconded the motion, which was adopted.—It was decided to take means to form, if possible, a county fund for the benefit of distressed agriculturists, and the secretary was instructed to appeal to landlords and others for support.—Dr. Hodgson (chairman of the weights and measures committee of the Cheshire County Council) attended before the chamber, at the request of the secretary, with a view to ascertaining the opinion of the chamber as to the desirability of selling milk by weight instead of by measure.—Dr. Hodgson pointed out that the tankards in which milk was at present sent to the large towns were knocked about a good deal in transit, and did not long represent their correct measure through being dented and bulged in. If they were to have these cans periodically tested it would be a costly matter, and even then they would not long represent the standard measure. The county weights and measures committee wanted the opinion of the farmers, so as not to have any friction with them, or impose unnecessary restrictions upon their trade.—After some discussion, it was resolved that milk sold wholesale should be sold by weight; and Dr. Hodgson was thanked for his attendance and his address to the chamber.

WARWICKSHIRE AND ADULTERATION.

THE county analyst, in his report, presented at this week's meeting of the Warwickshire County Council, stated that the samples submitted to him during the past quarter consisted of the following articles:—Milk, ninety-five; butter, thirty; mustard, five; tea, two; coffee, six; vinegar, one; oatmeal, two; whiskey, seventeen; gin, two; rum, one; brandy, one; pepper, five; lard, four; chocolate, one; liquorice, one; sweets, four; sugar, one; cheese, one; ground ginger, one; compound tincture of camphor, two; spirits of camphor, one. One of the samples of coffee contained 60 per cent. of chicory. The other samples of grocery and the samples of drugs were genuine and of good quality, while the four samples of sweets contained no harmful ingredients. In compliance with their resolution he had examined all the samples of milk and butter submitted for the purpose of discovering boracic acid or other preservative. He was pleased to be able to report that all of the ninety-five samples of milk were free, but no fewer than eight of the samples of butter contained boracic acid. Of the 183 samples analysed, eleven were adulterated, giving a percentage of adulteration of articles submitted of 6·0. The adulterated articles were purchased in the following districts:—Aston Mann, three; Foleshill, one; and Solihull, one; while three were submitted by Inspector Bennett, and three by Inspector Salmon.

LEAD POISONING CASE AT SHOREDITCH.

AN inquest at Shoreditch on May 18, before Dr. Wynn Wescott, on a woman named Amelia Bedford, the wife of a workman who is confined in an asylum, goes to show that recent legislation, though it has modified the dangerous conditions under which the lead worker labours, has not supplied a complete remedy.

Mrs. Bedford was engaged at the lead mills of Messrs. Champion and Druce, in Southgate-road, in carrying white lead to the stores. The doctor of the firm passed her each week as fit for work, and in spite of this she suddenly became ill, was seized with convulsions, and died from chronic lead poisoning.

A juror asked Dr. Forbes, of the Shoreditch Infirmary, who was one of the witnesses, whether he had had any other cases from the mills, and got the answer:—"Oh, yes! a great deal, but not so many since the passing of the recent Act."

The jury returned a verdict of "Accidental death."

THE PADDINGTON VESTRY ANALYST'S REPORT.

MR. ALFRED W. STOKES, F.C.S., F.I.C., the public analyst, reported that during the quarter ending March 25 he had received from the Inspector 93 samples of food. These consisted of—milk, 51 samples; butter, 20; bottled fruits, 10; lard, 6; coffee, 4; pepper, 1; and mustard, 1. Of these there proved to be adulterated 4 samples of milk and 2 of butter. The vendor of a sample of milk from which 30 per cent. of the cream had been abstracted, was fined £10; another, whose milk contained 5 per cent. of added water, was fined £3. In a case where 9 per cent. of water had been added, the fine was only 10s.; while for adding 17 per cent. of water a fine of £2 was imposed. The two samples of butter were adulterated with 45 and 50 per cent. of margarine respectively; the vendors of these were fined, the one £3, the other £2. The various samples of bottled fruits were preserved solely by boiling them in water in the bottles, and then sealing these up air-tight. No preservative such as borax or salicylic acid could be detected. Except in one case, where the air had got in, the preservation was very effectual; the fruit, though

not possessing the full flavour of fresh fruit, was perfectly good and wholesome. None of the other samples called for any special remark. The total amount for fines ordered to be paid into the Vestry's account was £20 10s.—The report was approved and ordered to be circulated.—It was further reported that Robert Barnes, of 21, North Wharf-road, was, on the 8th ult., fined 40s. and 12s. 6d. costs for selling milk with 17 per cent. of added water, and that Richard Isaacs, of 2A, Ashmore-road, was, on the 29th ult., fined two sums of 20s., with 12s. 6d. costs in respect of each, for selling milk (two samples) containing 10 per cent. and 7 per cent. of added water.

ST. LUKE'S VESTRY AND THE FOOD AND DRUGS ACT.

MR. W. HOWES (Chairman of the Public Health Committee) said that a summons which had been taken out by the Vestry against a milk dealer, in which the case was dismissed with £3 3s. costs against the Vestry, was another instance of the unsatisfactory manner in which magistrates accepted evidence. The Vestry analyst certified 6 per cent. of added water; but the Government analyst at Somerset House said there were no evidences of the presence of added water. This had been experienced by other vestries, Hackney, for instance; in which a magistrate gave seven guineas costs against the vestry because he could not decide in the evidence for and against the analyst's report. The amendment to the Food and Drugs Act, however, would considerably alter matters as they now stand.

KENT COUNTY COUNCIL AND ADULTERATION.

THE County Analyst, Dr. M. A. Adams, reported that he had had 428 samples submitted to him for analysis during the past quarter, of which 416 consisted of samples of food and 12 consisted of drugs. Of the former, 40 samples were found on analysis to be adulterated, and of the samples of drugs three were found to be adulterated.

FERTILISERS AND FEEDING STUFFS ACT. — The District Analyst had two samples of fertilisers submitted to him by buyers during the past quarter. No feeding stuffs were submitted for analysis. The appointment of Mr. Lloyd as District Analyst for the county having expired, the Committee recommended his re-appointment for the term of one year on the same conditions as heretofore.

THE SALE OF FOOD AND DRUGS ACT.

THE Sale of Food and Drugs Act (says the *Eastern Daily Press*), has probably been the occasion of more legal quibbling than any other Act of Parliament passed in the last quarter-century. Its authors deserve well of the legal profession for the amount of business it has put into their hands. The contradictory answers given by eminent judges to such questions as "What is food?" and "What is a drug?" are legion, and now Mr. Justice Hawkins has supplied an answer to the question, "When is a drug not a drug?" which will make a notable addition to Professor Morgan's *Budget of Paradoxes*. A firm was prosecuted for selling arsenical soap which contained no arsenic. Now, arsenical soap is a drug, but as this soap contained no arsenic it ceased to be a drug, and so did not fall under the Act; hence the summons was dismissed. A case was taken to the higher court, and the justices' ruling has been confirmed. The commission of the offence complained of removed the offender from the operation of the Act. By breaking the Act, he has established his innocence of the breach. This is almost on a par with the logical dilemma in which, the story goes, an

ancient monarch was once placed. He had ordered the execution of a youth, but the lad's mother pleaded hard for his life. The monarch prided himself on his learning and logic, and in order to show them off and to get rid of the woman's importunities at the same time, he promised to spare her son, only on one condition—that her first words should be a proposition absolutely true. The poor woman, hardly knowing what to say, in despair exclaimed: "You will kill my son!" Now, what was that unhappy potentate to do? If he spared the lad the woman's words would be false, and he would have to kill the lad; but if he killed the lad the woman's words would be true, and he would break his promise. All his wise men could not show him a way out of the dilemma, and he is supposed to have died a raving lunatic in trying to find a solution. Our Food and Drugs Act will be having its victim yet.

IMITATION CHEESE.

THE following letter has been received at the Liverpool Chamber of Commerce on the subject of the entry of "imitation cheese" as such in certain of the Bills of Entry at ports of Great Britain. The Chamber had drawn the attention of the Customs, London, to the necessity for the procedure adopted being followed, in the interests of importers of cheese:—

"Custom House, London, May 29, 1897.

"Sir,—With reference to your letter of the 6th inst., on the subject of the official registration of importations of filled or imitation cheese, I am directed by the Board of Customs to acquaint you that, since the year 1884, the official import list has required a distinction to be shown between 'cheese' and 'imitation cheese' in the importers' entries, and that these distinctions appear in the annual statements of trade. They are also shown in the Bills of Entry, as, for instance, in the London Bill B., of the 16th and 19th March last. Due notice of any such entries is also taken at the other ports named in your letter. The Liverpool practice has also been to publish particulars of 'imitation cheese' separately from 'cheese' in the Bill of Entry, except in the case of a recent entry amended to 'imitation cheese,' the correction of which entry was not at first recorded in the Bill of Entry, but this omission has since been rectified.—I am, etc.,

"(Signed) R. T. PROWSE."

ALLEGED TAINTED SALMON IN LIVERPOOL.

IN consequence of information which had been conveyed to the authorities in Liverpool as to the alleged tainted condition of a quantity of tinned salmon to be offered for sale by auction on Thursday, the health authorities attended the sale, which was held in a certain broker's office. *The Grocer* says:—

"We are informed that the allegation was that 6 per cent. of the salmon was tainted. The broker read some correspondence he had had with the Medical Officer of Health, and he was careful to announce that he was not selling the salmon for human food. Several questions were asked by the parties present as to the position they would be in if they purchased the salmon—would the Medical Officer be able to seize the whole of it? The auctioneer announced his inability to answer the question, but gave an opportunity to Dr. Hope's representative, who was present, to do so. This, however, he was unable to do, but said that if any of the salmon were sold the medical officer would like to trace it. Several gentlemen condemned in forcible language the springing that morning of the Medical Officer's communication upon the auctioneer, and said it was the outcome of action of parties who were endeavouring to

damage the trade. One gentleman said he would risk selling the salmon over the counter, but would open every tin before he served it, so as to keep himself right. Considerable feeling was manifested, and a resolution was carried requesting the auctioneer to withdraw the salmon in question until a deputation had had an opportunity of waiting upon the medical officer as to the legal aspect of the matter."

SPIRITS.

At Airdrie, on May 24, before Sheriff Mair, Daniel Logue, spirit merchant, High-street, was charged with selling three gills of whiskey which was reduced by admixture of water or otherwise by 31 instead of 25 degrees. He pleaded guilty, and it was explained that the offence had been inadvertent in connection with the method of testing by the hydrometer. He was fined £1.—John M'Farlane, spirit merchant, High-street, pleaded guilty to a similar charge, the whiskey in his case being 31·6 under proof. He was also fined £1.

At Newport, May 26, two cases were preferred under Adulteration Acts of selling whiskey under strength, the defendants being Jeremiah McCarthy, landlord of the Angel Inn, Blewitt-street, and Frederick Porter, landlord of the Wellington Inn, St. Woolos-road. The Town Clerk (Mr. Newman) prosecuted, and the evidence in Mr. McCarthy's case was that a pint of whiskey bought on the 4th inst. showed 3·06 degrees below the standard. Mr. Lyndon Moore, for the defendant, put in Mr. Thompson's analysis to show that the whiskey was only 1·57 degrees below strength, and submitted that this small proportion was due to evaporation caused by heat, extending over the two or three weeks it was kept locked in defendant's bar after it was received from Messrs. Phillips, the brewers. The Town Clerk alluded to a recent case reported last week, in which the Superior Court upheld the decision of magistrates that apparent dilution up to 10 degrees was due to evaporation. The Bench decided that it was an offence to sell whiskey below strength, however that "belowness" was produced. Mr. Thompson, called by Mr. Moore, admitted, in reply to the Town Clerk, that there was a mode by which evaporation might be provided for before it was sent out, but that for a quick retail trade it was often sent out as near as possible 25 degrees under proof; and John Phillips, foreman cellarman to Messrs. Phillips, said he used Sykes' hydrometer to reduce the whiskey intended for Mr. McCarthy to the proper strength—24·9 below proof. The Bench decided that as the percentage was so slight the case would be met by the payment of costs.—The evidence against Mr. Porter showed that there was an adulteration of 8·59 degrees below the standard. Mr. Moore admitted 5 degrees, and assured the Bench that the defendant had relied on a rotten reed—the usual notice in the bar as to dilution. The magistrates found defendant guilty, and fined him 20s.

LIE-COCOA.

A GROCER of Stebondale-street, Cubitt Town, London, was summoned, at the instance of Mr. Cephas Foad, inspector under the Sale of Food and Drugs Act for the Poplar District Board of Works, for selling cocoa adulterated with 87 per cent. of a mixture of arrowroot and sugar.—Mr. Mead told defendant that he had no right to sell such stuff for cocoa and fined him 30s.

It is strange that other articles sold as cocoa and adulterated with various eulogised drugs have not yet been brought before the courts.

MARGARINE.

At Airdrie Sheriff Court, on May 24, before Sheriff Mair, Wm. M'Ilwraith, grocer, High-street, pleaded

guilty to a charge, at the instance of the burgh inspector, under the Food and Drugs Act, of exposing for sale and selling margarine without having a label attached in terms of the Margarine Act. He was fined £1.—David Niven, grocer, Stirling-street, was charged with a similar offence, and also with selling a package of margarine in an insufficiently labelled wrapper. The same penalty was imposed after evidence had been led.—Alex. H. Smith, grocer, South Bridge-street, was charged with exposing margarine in his shop with the keg insufficiently labelled. He was fined 15s.

At Broxton (Chester), on May 25, William and Thomas Cawley, trading as grocers and provision dealers, were fined £10 and costs in one case, and £1 and costs in a second case, for selling margarine as butter. In both cases butter was asked for and paid for at the rate of 1s. per lb. On analysis, the samples were found to contain "100 per cent. of margarine."

BEER.

At Lambeth, on May 31, William M. Collins, a licensed victualler, of Marmont-road, Peckham, was summoned by the Excise for diluting beer.—Mr. Dennis, who appeared in support of the summons, stated that a sample of stout taken at the defendant's house was found to be diluted.—The defendant was ordered to pay a penalty of £20.

SUGAR.

At Lambeth, on May 27, J. Oliver, of Sunwell-street, Camberwell, was summoned by Inspector Morley on behalf of the Camberwell Vestry for selling Demerara sugar not of the nature, quality, and substance of the article demanded by the purchaser. He was further summoned for selling coffee containing chicory.—Mr. G. W. Marsden, solicitor to the vestry, appeared in support of the summonses.—As to the sugar, the analyst came to the conclusion that it was dyed sugar other than Demerara.—The defendant was fined 20s. and costs upon each summons.—W. J. Rose, of Harders-road, Camberwell, was also fined 20s. and costs for selling dyed sugar as Demerara.—The defence was that the sugar was served in mistake.

HANTS COUNTY COUNCIL AND THE DISTRICT AGRICULTURAL ANALYST.

THE General Purposes Committee recommend that, subject to the approval of the Board of Agriculture, Dr. Bernard Dyer be reappointed District Agricultural Analyst for one year, at a fee of £1 1s. per analysis, 7s. to be payable by the person submitting the sample, and the balance of 14s. by the county.

Mr. Judd stated that there was nothing whatever for Dr. Dyer to do, and he hoped that this appointment would not be made after the present year. Some people thought the farmers were too stupid to take advantage of the services of the County Analyst, but the fact of the matter was that they could have their analyses made for 5s., and did not see why they should put the county to the expense of 14s.

Colonel Grimston replied that they were compelled to make the appointment, and, independently of that fact, he thought it would be a pity to drop that officer, because they never knew when an agriculturist might like to take advantage of the District Analyst's services.

The recommendations were then agreed to.

BERMONDSEY VESTRY AND ADULTERATION.

UNDER the Food and Drugs Act 219 articles of food have been purchased for analysis during the past year, the results showing that 52 were adulterated, of which no fewer than 28 were taken on Sundays.

MILK—AND HOW TO SELL IT.

(Concluded from page 262.)

TRADERS DISORGANISED.

I WOULD here point out that a great danger of friction and injustice is likely to arise between authorities charged with the administration of the law and traders, when these traders are disorganised and silent, and without any interest in affairs which concern themselves. The law is charged with a definite work; its officials, we shall say, have the proper zeal for their vocation. The knowledge to carry out that zeal will, however, be woefully incomplete without some intelligent conference with the traders affected by their existence. If, on the other hand, these traders were as corporate as the authorities are with the disposition and the power to give the officials the benefit of their views and experience of what should be done or left undone, then everything would go well. But everything will go ill if it is left to amateurs and men altogether unconnected with the particular trades to press fads and suggestions upon authorities who really have not the time to consider the subject thoroughly, and get them embodied in Board of Trade or Health Committee regulations, or Acts of Parliament, without having any evidence or effective remonstrance from trades so affected.

It is not so long ago since, in different parts of the country, on the initiative of a committee of the London County Council, attempts were made to enforce the stamping and gauging of vessels used for the storing and carriage of milk, and to have these regarded as measures within the meaning of the Act; and, but for the strenuous resistance of members of the dairy trade, and the directors of the Glasgow Dairy Company, along with some of the bailies of the town, particularly Bailie Gray, Sir James Marwick, and Sir Wyndham Anstruther, this would have been given effect to in some localities and not in others. Such an absurdity to practical men needs no comment. What my remarks under this head tend to show amounts to this, that the dairy trade should be interested and alive in regard to the legislation by which it is affected or threatened. Every dairyman should give some of his time to reading the daily or evening newspapers, journals of all kinds relating to his trade, and new books from the pen of every author on the subject of dairying, the handling and distribution of milk, and on the air we breathe, and the water we drink. Further, he should be prepared to support at all times every good regulation, and to make such even more effective, and to prevent mischievous regulations from coming into existence. It would be a good thing for every community if the trade could send one or two clear-headed dairymen into every Health Committee all over the kingdom.

In conclusion, the dairyman should be prepared, to the best of his ability, to cater for the public good, under the assured certainty that he is selling milk and cream from good healthy cows, housed in good sanitary byres, and that he himself is dealing with honest farmers, giving them a good price for their produce, seeing that he expects the same in return from the public. If he succeeds in doing all this, he will elevate and improve his trade as he journeys through life, and will have the pleasant satisfaction of knowing before he dies that he, as a trader and benefactor to mankind, leaves the world better than he found it.

Now, ladies and gentlemen and fellow-workers in this great and important industry of the world, I would only add a few well-known lines from Longfellow:—

"In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle;
Be a hero in the strife.

Lives of great men all remind us
We can make our lives sublime,

And, departing, leave behind us
Footprints on the sands of time.

Footprints, that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother,
Seeing, shall take heart again.

Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour and to wait."

We like the bulk of this lecture, but we must, in justice to clear writing, object to the drivel from Longfellow with which Mr. Leitch concluded his lecture. The poet Bunn saying,

"When hollow hearts shall wear a mask
'Twill break your own to see,"

was not guilty of more unadulterated idiocy than Longfellow in the nonsense entitled "A Psalm of Life."

We could understand a person leaving footprints on granite, but on the "sands of time"?—No; it is stupid, for the next wave would obliterate them. Again, whether it is another footprint, or a great man, which sails o'er life's solemn main, is not quite clear, but how a footprint, or another, or a brother, can be sailing o'er life's solemn main, and be at the same time forlorn and shipwrecked on the sands of time, and the rest of the drivel, passes our comprehension.

It is more necessary that we should have our milk pure than our poetry, but unfortunately there are too many humbugs masquerading as the genuine article in both milk and poetry.

HAMMERSMITH VESTRY AND THE SALE OF FOOD AND DRUGS ACT.

THE Sanitary Committee reported that having considered the circular letter from the Paddington Vestry, enclosing copy of a report of their Sanitary Committee, containing certain recommendations for the amendment of the Sale of Food and Drugs Act, and having been informed that the Government had prepared a Bill dealing with the subject of food adulteration, which Bill they proposed to introduce during the current Session should business allow, they recommended that the Paddington Vestry be informed that, while agreeing generally with the suggestions contained in the report of their committee, they think the Government should be urged to bring in its Bill without delay (whether it could be proceeded with this Session or not) so that it could be discussed fully and in detail both by local Sanitary Authorities and the trade.

The report was adopted.

THE FOOD AND DRUGS ACT IN LINLITHGOWSHIRE.

THE annual report on sanitary operations in the county of Linlithgow has just been issued by Mr. John Frew, sanitary inspector for the county. Under the Sale of Food and Drugs Act 26 samples were taken for analysis, and of these 21 samples were certified genuine, while 5 were certified as being adulterated, and proceedings instituted against the offenders.

WANDSWORTH DISTRICT BOARD OF WORKS AND ADULTERATION.

MR. S. H. SMITH, the Inspector under the Sale of Food and Drugs Acts, reported that 22 samples of pepper, butter, milk, and cocoa, purchased from shopkeepers in Clapham and district, had been analysed and found genuine except three samples of cocoa still under process.

**To the Grocers, Provision Merchants, Pastry-
Cooks, Confectioners, and the Public
of the United Kingdom.**

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A PERFECT, PURE & WHOLESOME BUTTER SUBSTITUTE, for Table use and every description of Pastry. In Colour, Flavour, and Texture, equal to the Best Brands of Butter, costing one-third less. This unique product stands far above other makes, and has received honour everywhere.

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“THE LANCET,” the leading Medical Authority of the World, says:

“It is of Pure and Excellent Quality.”

Monsieur ARNAUD, Chef to his Grace the Duke of Westminster, says:

“I hereby certify that ‘LE DANSK’ is equal to Butter for Pastry Making in the way of Taste and Lightness, and Superior to same [in giving a Rich Colour. I can testify to the above, having made full experiment.

(Signed) S. ARNAUD.”

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What it is!

BOVRIL is Beef, the entire lean of the Best Beef procurable. Not the Forty Pounds Weight of Beef which would have to be eaten before the nourishment contained in One Pound of Bovril could be imparted to the system, but Forty Pounds of the prime parts obtained from the finest selected cattle reared in Australia and South America, concentrated by a special process, rendering it the most perfect form of strengthening, stimulating, easily digestible nourishment in the smallest possible bulk.

What it is not!

BOVRIL is not merely a Meat Extract containing only the stimulative without the nutritive constituents of Beef. With the ever increasing rush of Life, commercially and socially, there arose a demand for a stimulant without deleterious after-effects; hence the introduction of ordinary Meat Extracts, Meat Essences, &c. But stimulant without nourishment simply stirs up the Fire of Life without providing for its continuance, thereby exhausting the system; the result being precisely the same as if poker were solely depended on to FEED the household fires.

INVALID BOVRIL

is specially prepared for use in the sick-room, and is put up in porcelain jars, obtainable from chemists and druggists only.

It contains the entire nutritive and stimulative constituents of Prime Ox Beef, and differs from ordinary Bovril in being more concentrated and quite devoid of seasoning, solving the great difficulty which all medical men recognise of furnishing substantial nourishment to the system through a debilitated stomach, nature being so effectively assisted that perfect digestion and assimilation is certain.

Strength to sustain the patient through the crisis of the illness, and strength to carry the invalid to a speedy convalescence and recovery is all important, and Bovril (which is not merely an Extract of Meat but Meat ITSELF) furnishes the system with renewed strength and increased vitality, being relished and retained when ordinary foods are rejected.

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Food and Sanitation.

SATURDAY, JUNE 12TH, 1897.

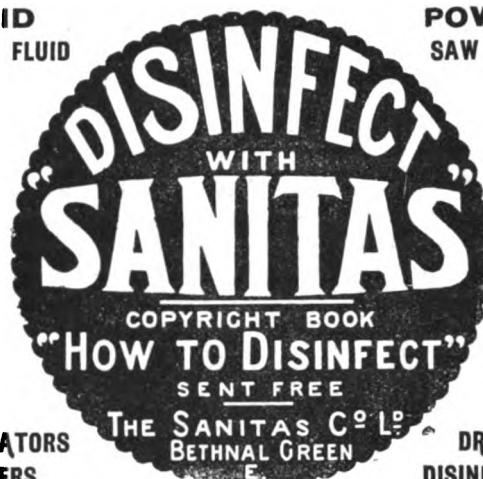
FLESH FOODS AND DISEASE.

By DAVID PAULSON, M.D.

THERE are various reasons for the almost universal use of animal foods as an article of diet. They are particularly rich in one of the food elements which is essential for the nourishment of the body. They have in them stimulating properties which leave upon many

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who eat them for the time being an invigorating effect, which they have learned by experience they cannot get from the simple products of the earth.

Again, many cooks have become quite skilful in preparing flesh foods in a variety of ways, while they are unable from fruits, grains, and vegetables to prepare palatable and appetising dishes. While it is no doubt true that flesh foods properly prepared are less harmful to the system than some of the foods of the vegetable world, prepared in an indigestible and unpalatable manner, yet there are many reasons why meat forms an improper article of diet.

It is the fibres of the meat which are of real food value. In the interstices, between these fibres, there is always more or less blood, waste matter, and various salts. When the animal is killed, the blood leaves the body much as the water runs out of a sponge when it is lifted out of the water, but for the same reason that the sponge still retains a large amount of moisture, so the flesh food contains much blood.

This can be readily demonstrated by taking a piece of meat and putting it under a current of running water for a few hours, when we shall find the white, stringy fibres from whence the blood has been all washed away; but if this should now be eaten it would form an insipid and tasteless food, thus showing what really gives the flavour to meat is the products lodged between its fibres, and which can be washed away in the manner above mentioned.

As the blood of the animal always contains a large proportion of poisons, as the result of tissue breakdown, it must be clear at once that the individual who subsists upon flesh food must be continually taking into his system poisons which would have been eliminated by the animal if it had lived. This has been demonstrated practically frequently. If a person who has been subsisting entirely upon a natural food allows flesh to enter largely into his diet, the kidneys at once eliminate several times as much of poisonous substances as they did before. It is for this reason that all intelligent physicians advise the discontinuance of meat during fever, which is a condition in which the body is already over-saturated with poison; also in kidney diseases, when those organs are not able to carry off even the waste which is made by the body itself. These physicians recognise that to introduce a food which contains so much waste matter would shorten the life of the individual.

The conclusion from this is very simple. The individual who makes use of flesh foods must always have a larger amount of poison in his blood on the way to be eliminated. It means that every cell of his brain must be stimulated or irritated, whichever may be the case, in the same way. As long as his eliminating organs are in perfect condition he may enjoy very good health. At the same time he is certainly inviting disease in

many of its dangerous forms, and premature death, from continually imposing this task upon the various organs of his body.

THE RIGHT TO EAT ANYTHING.

IF you like fusel oil in your whisky, if you prefer chicory in your coffee, if you have a sneaking kindness for the great American pie—there is no objection to all or any of these forms of dissipation, always provided that you are honestly told what you are eating and where you may expect to go to after you have eaten and drunken. It is the duty of the state to give you that information by means of inspection of food and the requirement of honest brands specific as to ingredients.

Such in brief was an address made by David Starr Jordan of Stanford to the pure food congress Saturday. Dr. Jordan's purpose was to outline to the congress the field in which it might advantageously work for state regulations of food products without infringement of a man's common law right to eat anything he likes, so long as he knows what it is.

Dr. Jordan said: "The state should not attempt to enforce individual ideas of virtue because there are so many differing prejudices and the statutes might be tyrannical or foolish. A great deal of the temperance legislation has been faulty because it was founded on ideas of virtue held by law makers. In Kansas the other day there was a man who proposed to enact the Ten Commandments. You cannot compel a man by law to honour his father and mother, although it is a good thing. Virtue can only come from the men themselves.

"Why should we use chicory instead of coffee? Chicory is harmless. Why not allow cigars to be made of cabbage leaves or brown paper? They contain no nicotine. Why prevent the watering of milk? Some people urge that it makes the milk cheaper, and so brings it within the reach of the poor. All these and other similar questions are met by the principal that if you hold a man responsible for his acts you must let him know what he is doing. It is a worthy end of legislation to let him know, and the only way to reach the thing is by the action of the state.

"I believe that in time we must come to have a United States law that all food shall bear a label showing the name of the manufacturer and all that the article contains, and this applies to medicine as well as to food. I believe that this is more important to us than questions of tariff or finance. We have the right to insist that manufacturers shall not sail under false pretences. This is the more important because we are coming to the production of synthetic food. Out of the elements of coal tar we are already producing a large variety of dyes and medicines, and from the same elements it is possible to produce imitations of many kinds of food. If that be so let the elements be stated. We have only just begun this process of producing synthetic food. We will encounter the opposition of the men investing capital in the production of these things. The corporations are outgrowing the limits of the states, and their regulation can only be obtained by federal action. If the government undertakes the stamping of money there is no reason why it should not stamp foods. There should be the stamp of some authority able to enforce penalties for counterfeiting, as in the case of money."

Inspector Dockery gave some account of the work done by him under the orders of the Board of Health of this city in the way of punishing and preventing adulteration. He said:—

"About 900,000 gallons of milk are inspected monthly at the four stations. The beneficial results obtained through the inspection of milk are shown by a comparison of the death rate for the first nine months of the crusade as compared with the corresponding nine months for eight years past, the mortality among

infants under one year of age having been reduced over 50 per cent."

THE MILK SUPPLY OF LIVERPOOL.

THE results of the investigations which for some time past have been conducted by Dr. Hope, medical officer of health for Liverpool, and Professor Boyce, the well-known bacteriologist of University College, are embodied in a report to the City Council, which was published on May 25. The report, says the *Liverpool Daily Post*, contains some very important statements. After referring to the danger of propagation of infection through the consumption of raw milk, the medical officer offers some general observations on the effects of sunlight, ventilation, and cleanliness in checking the growth of the bacillus of tuberculosis, and the baneful results of the opposite insanitary conditions. He shows that improved sanitation has reduced the mortality of children under five from phthisis from 637.1 per 100,000 of the population per annum in 1866 to 496.9 in 1896. The commoner form of the disease among young children—consumption of the bowels—shows that it is due to the swallowing of infected food. Proceeding, the report states:—"It will be well to consider the results of the careful investigations made by Professors Boyce, Delepine, Hamilton and Woodhead into the condition of milk supplied to the city. Ordinary samples, in readiness for, or in course of delivery, were taken for the purpose and forwarded to the investigators with due care. A total of 168 samples were taken, 122 from cans in dairies and shippens, 24 from railway cans on arrival, 13 from hospitals, and 9 from unmixed milk. The milk dealt with fairly represented the city supply. The samples were forwarded in bottles specially prepared, numbers were put upon each, and the bacteriologists were not informed of the places from whence the samples came."

The investigations made, both by microscopical examination and experiments upon living animals, are described in detail, and the medical officer points out that in 1896 there were in Liverpool 404 shippens licensed to contain 5,393 cows. He explains the method adopted for the registration and inspection of these places by the five inspectors appointed for the purpose, concluding this part of the statement by remarking that there is a wealth of evidence to show that animals taken from insanitary cowsheds are those which suffer most, while those living in a healthy state are comparatively seldom affected. This has an important bearing upon the question of compensation for animals which have been seized as tuberculous. The remedy lies largely, if not entirely, with the cowkeeper. If he houses his animals properly, there will be very little disease. So long as compensation is paid him for losses by disease of his own manufacture, he will have no interest in incurring expense to remove the causes of disease.

Of the 108 samples submitted for analysis, eleven were found to contain tubercle, seven being samples of milk brought from the country, and four taken from town shippens. The proportion of infected milk to the total supply brought into the city from the country was 29.1 per cent., and the proportion in town milk 2.8 per cent. This is attributed by the medical officer to the strict supervision exercised over the town shippens, and he draws the inference that consumers are safer, as far as tuberculosis is concerned, with milk from city shippens than with milk sent in from the country. The most likely means to eliminate tubercle absolutely from the milk supply of Liverpool is a rigorous application of the existing orders and bye-laws. He hopes the Health Committee will not lose sight of the fact that the condition of the shippens in country districts indirectly restricts and limits the sanitation of shippens within the cities, since there is a danger that if sanitary requirements are insisted upon beyond a certain point city shippens will be closed and cows will be kept

outside the municipal boundaries, beyond municipal control, and under the mischievous conditions which result in so much harm. In regard to town shippens it is desirable that powers should be obtained to prevent the erection of shippens in confined and populous districts, and to enable due regard to be paid to the necessities of adequate yard space exclusively belonging to the shippens. Powers to remove diseased animals from shippens are too indirect to be thoroughly efficient.

Concluding, the report states:—"Important as the percentage of infected milk from town shippens undoubtedly is, it sinks into insignificance beside the large proportion of milk infected with tubercle which is sent in from the country, which is no less than 29·1 per cent. This large percentage may not be a matter of astonishment to those who are familiar with the condition of many country shippens, but it is a fact which demands the attention of those who are responsible for the administration of those shippens. The tubercle bacillus can be destroyed by boiling for a few seconds, and it is well that this course should be adopted, since milk as nature intended it differs in important particulars from the milk of commerce. Additional powers are required to prevent the erection of town shippens without adequate yard space, and without adequate open spaces around them. Measures are also called for to prevent the importation into cities of the diseased products of insanitary country shippens."

An amended code of regulations designed to carry out the suggestions of Dr. Hope has been prepared at the instance of the Health Committee by the Town-clerk.

AMERICAN v. NORTH CALIFORNIAN SYRUP OF FIGS.

DECISION IN THE COURT OF APPEAL.

In the Supreme Court of Judicature, on May 31, the case was heard before Lords Justices Lindley, Lopes, and Rigby, Judges in the Court of Appeal, of the Californian Fig Syrup Company v. Taylor's Drug Company. This was an appeal from a decision of Mr. Justice Kekewich. The action was brought for an injunction to restrain the defendants from passing off their goods as the goods of the plaintiffs by the use of the words "American syrup of figs." The plaintiffs were an American company, and were large manufacturers and vendors of a medicinal preparation called fig syrup. The plaintiffs' fig syrup was manufactured in America, and it was sold in this country by means of a depôt here, and it became known in the market as Californian fig syrup. The defendants manufactured and sold in England a similar preparation, which they sold as American syrup of figs, and for this purpose they adopted the title of the "American Syrup of Figs Company." The learned Judge came to the conclusion, on the evidence, that this mode of trading was calculated to deceive purchasers into buying the defendants' goods under the impression that they were buying the plaintiffs'; and he therefore granted an injunction against the defendants. The defendants appealed.

Mr. Fletcher Moulton, Q.C., Mr. Bramwell Davis, Q.C., and Mr. Sebastian were for the defendants; and Mr. Warrington, Q.C., and Mr. John Cutler, Q.C., for the plaintiffs.

The Court allowed the appeal.

Lord Justice Lindley, in giving judgment on May 28, stated that he was of opinion that the order of the learned Judge could not be supported. There was no doubt that the defendants were endeavouring to create and carry on a business in this medicament—this syrup of figs—and they apparently thought it would be advantageous to them in their business to call their preparation "The American Syrup of Figs." The plaintiffs, not unnaturally, objected to this; but the question was

whether the defendants were passing off their goods as the goods of the plaintiffs. His Lordship thought that they were not. In all these cases the first thing to do was to look at the things themselves. If the matter was to be judged by the appeal to the eye, it was impossible to say that the defendants were guilty of passing off or endeavouring to pass off their goods for the plaintiffs' goods. It was not disputed that the make up of the defendants' goods was essentially different from that of the plaintiffs. That, though not conclusive, went a very long way towards determining the question. The plaintiffs were driven to rely upon the introduction by the defendants of the word "American," and they suggested that their preparation was known on the market as "Californian Fig Syrup," and that the word "American" was used by the defendants as being synonymous with "Californian." It was proved conclusively that the plaintiffs had no exclusive right to the term "Syrup of Figs." Their real grievance was that the defendants were making an unfair use of the word "American." But, in his Lordship's opinion, it could not be said that the word "American" was so like the word "Californian" either in its sound or in its appearance as to lead to confusion. Mr. Justice Kekewich had been influenced in his judgment by the adoption by the defendants of the name "American Syrup of Figs Company" for the purpose of selling goods manufactured in England, and it might be that the defendants had gone further than they ought in the use which they made of that word; but that was not the question at issue. The appeal should be allowed.

Lords Justices Lopes and Rigby concurred.

WATER IN BUTTER.

At Royton Police Court, on May 26, two cases under the Food and Drugs Act were down for rehearing. When the cases came before the Bench a fortnight before, the Magistrates were divided as to what was a fair percentage of water to be allowed in Irish salt butter. At the first hearing there were four gentlemen on the Bench, but on Wednesday there were six, namely, Messrs. T. Seville (Chairman), J. Wolstencroft, A. Crompton, J. Hamilton, E. Schofield, and J. Lees. The first case taken was against the Royton Co-operative Society for selling butter containing 18·9 per cent. of water to Inspector Parkinson, who is employed by the Royal Lancashire Agricultural Society, and acting in conjunction with the Lancashire County Council. Mr. G. Clark appeared for the complainant, and Mr. Fripp represented the defendants.

Mr. Clark, in opening the case, said the prosecution was not a vexatious one, but for the benefit of the public, who had no right to be offered excessive water in butter. The prosecution contended that 16 per cent. was more than an ample allowance of water in salt butter, and that an excess over that was adulteration. It was possible to get salt butter with 10 per cent. of water only. There had, however, been no standard fixed as to what was a proper percentage of water, and the Legislature had left it to the Magistrates to decide what they held to be a fair standard. In the Royton Court the Bench had already expressed an opinion that 16 per cent. was an ample percentage. Why, he asked, did not buyers secure a guarantee from the merchants? That would free them from the prosecutions even if their butter contained 75 per cent. of water. The buyers could protect themselves by this means.

William Jas. Parkinson, the complainant, said he had a large experience in butter, having been a butter merchant. His opinion was that 14 per cent. was a sufficient percentage of water to put into Irish butter, the other constituents being 80 per cent. of butter fat, 4 or 5 per cent. of salt, and the remainder curd and mineral matter.

Cross-examined by Mr. Fripp: His society was not endeavouring to increase the sale of Lancashire butter at the expense of Irish butter.

Walter Collinwood Williams, public analyst, said that there was no reason why salt butter should have more salt in it than fresh butter. In respect to the analysis of the butter purchased by the prosecutor from the Royton Co-operative Society, he found that it contained 18.19 per cent. of water, 73.38 of butter fat, and 8.43 of curd and mineral matter, of which 5.02 was salt. In his opinion the water and salt were excessive.

Mr. C. Estcourt, analyst, of Manchester, agreed with the opinion given by Mr. Williams.

Miss Mary Sheehy, butter-making teacher to the Lancashire County Council, said she was taught butter-making many years ago at the Glasnevin Model Farm, Dublin, and had had a large experience. Fourteen per cent. of water she considered a very liberal allowance. She had known Irish butter, made without improved appliances, contain a much less quantity of water.

Mrs. Mary Elizabeth Clegg, Clifton House Farm, near Preston, stated that she made butter in the old-fashioned way, and had done so for 40 years. She had been an exhibitor of butter for 27 years, and had won over 100 first prizes, consisting of silver cups and medals. She had made butter herself, dry-salted, with under 10½ per cent. of water.

Mr. Fripp, for the defence, maintained that the prosecution had made out no case against his clients. The charge of fraudulently adding water having been withdrawn by the prosecution, the question for the magistrates was simply whether there was an undue amount of water in the sample in question. The prosecution was merely got up by faddists to fix a standard of their own, which, up to the present, they had failed absolutely to establish in other places. He had challenged Mr. Clark to prove any conviction in Ireland for a percentage of water less than 20 per cent.

Wm. L. Stokes, J.P., of Limerick, who had given evidence before the Select Committee of the House of Commons, gave his opinion that under favourable circumstances 18 or 19 per cent. of water in butter was a fair standard, but in the absence of those favourable circumstances nothing under 20 per cent. would be fair.

Robert Hickey, a Limerick butter merchant, and honorary secretary of the South of Ireland Butter Merchants' Association, maintained that 20 per cent. of water was little enough. If they fixed the standard at 16 per cent. it would ruin 80 per cent. of the Irish salt butter trade, which was a very important trade, as the turnover was from two to two and a-half millions per annum. If they lost the home trade, it would go to Denmark, France, and other places.

D. J. O'Mahony, public analyst for the city and county of Cork, said he had analysed hundreds of samples, and generally the results showed from 14 per cent. up to 21, 22, and 23 per cent. of water. He had never given a certificate for a prosecution where there had been less than 20 per cent. of water. He had found butter, made honestly, with over 20 per cent. of water.

Mr. E. Schofield (magistrate) asked the witness why in Ireland the tenant farmers did not use dry salt instead of brine.

Witness said he could not tell.

Thomas Pearson, manager of the butter department of the Co-operative Wholesale Society, stated that on an average 1,400,000 lbs. of butter passed through his hands annually, and the butter in question was specially prepared for keeping. It was the only butter which would keep and give satisfaction to the public.

Edward William Taylor Jones, public analyst of Staffordshire and other places, having given evidence,

The Magistrates retired to consider their decision. After an absence of a few minutes they returned, and the Chairman said the Bench were equally divided on the matter.

Mr. Clark asked for an adjournment to enable arrangements to be made for re-hearing the cases. With respect to the other case which should have been heard, he also asked for an adjournment on similar grounds.

The Bench acceded to the application.

APPEALS.

THE NOTICE QUESTION.

In the High Court, Queen's Bench Division, on May 27, the case of *Palmer v. Tyler* came before Justices Day and Lawrance, sitting as a divisional court, in the form of an appeal by way of special case from the decision of certain justices, at Brentford, who had fined the appellant, a licensed victualler, for an alleged offence under the Sale of Food and Drugs Act, 1875.

Mr. Channell, Q.C., and Mr. Boxall appeared for the appellant, while Mr. Earle represented the respondents.

It appeared that the appellant, Mr. Richard Palmer, the proprietor of the Prince Albert Inn, Hampton-road, Twickenham, was summoned before the justices for having sold a quantity of rum which was not of the nature, substance, and quality of the article demanded. The article sold contained 70.6 of proof spirit and 29.4 of water. There was no label on the tap out of which the rum was taken to the effect that the spirit was mixed with water, but there was the following printed notice hung up in a conspicuous position in the bar: "The spirits sold at this establishment are of the same superior quality as heretofore, but to meet the requirements of the Food and Drugs Adulteration Act, they are now sold as diluted spirits, no alcoholic strength being guaranteed." The assistant of the local inspector of weights and measures, who purchased the spirit, admitted that he saw the notice after he had made the purchase, but alleged that he did not see it at the time it was served to him. The respondent—the inspector of weights and measures—said his object in taken the proceedings against the appellant was to make it known to the trade in his district that the seller of diluted spirits could not, by giving any sort of notice to the purchaser other than that prescribed by section 8 of the Act of 1875, defend himself against proceedings instituted under the statute. The appellant contended that the sale was not to the prejudice of the purchaser, that the respondent's assistant must have seen or wilfully refrained from looking at the notice which was hung up in the bar, and that he (the assistant) was not misled. He further argued that he had brought to the notice of the purchaser the fact that the spirit sold was mixed with it save matter which was not injurious to health and not intended fraudulently to increase its bulk, weight, or measure, or to conceal its inferior quality, and that no offence had been committed under the Food and Drugs Act. The respondent, on the other hand, submitted that no notice could protect the appellant except a label, distinctly and legibly written or printed, placed on the vessel containing the spirit, and that it was not open to the appellant to prove in any other way that the transaction was good and free from fraud. He further argued that if the rum sold was more than 25 per cent. below proof, and was sold from a tap and placed in a bottle the fact that there was no label on the tap or bottle in accordance with the provision of the statute was conclusive evidence against the appellant. The justices found, as a fact, that the rum in question was sold from a tap and placed in a bottle on which there was no label and was 29.4 under proof, but that it was not mixed with any ingredient injurious to health. They further said the dilution of the spirit was not intended fraudulently to increase its bulk, weight, or measure, or to conceal its inferior quality. They also found that the appellant had brought to the knowledge of the pur-

chaser that the rum sold was diluted if they were to be guided by the case of "*Sandys v. Small*," which was relied upon by the appellant, but they held, on the authority of the case of "*Jones v. Thomas*," upon which the respondent relied, that no notice could be sufficient unless it was by a label, distinctly and legibly written or printed, on or with the article or drug sold, and that as there was no such label affixed to the bottle or handed to the purchaser in the present case the appellant had committed an offence. For the appellant it was now argued that the justices were wrong, and that he had complied with the statute by placing a notice in a conspicuous part of the bar.

Their lordships, at the conclusion of the arguments, allowed the appeal and quashed the conviction.

THE SALARIES OF SANITARY INSPECTORS.

A FEATURE in the annual report of the medical officer of health for the Carnarvonshire Combined District, presented the other evening, was, says the *Chester Courant*, the mention that though meetings of the sanitary inspectors of the district had been held in the course of the year with the view of increasing their efficiency in the public service, five of them had resigned, after being engaged for many years. He expressed his regret that such officers "did not receive encouragement to remain at their posts and become increasingly efficient." It does seem a pity, seeing the important positions such officers fill, that their remuneration should be screwed down to the lowest minimum, as is too frequently the case.

CHESHIRE COUNTY ANALYST'S REPORT.

MR. J. CARTER BELL, the county analyst, reports that, during the quarter ended March 31 last, he has analysed 217 samples of various commodities, and found eight adulterated—six of milk, one of cocoa, and one of rectified spirit. He says:—"Out of 64 milks, 48 were of first-class quality, 10 were very poor samples, and if the 48 were taken as a standard, the 10 would be returned as adulterated. Two of these very poor samples were taken direct from the cows, and the analysis showed that the cows were being badly fed, or were in a poor state of health, for no healthy herd of cows could have yielded such poor samples of milk. These two instances show how important it is to follow up these poor samples of milk, in order that no innocent farmer should be accused of selling adulterated milk. The sample of cocoa was adulterated with 42 per cent. of starch and sugar. This has been a record quarter as regards samples under the Fertilisers and Feeding Stuffs Act. Nine samples have been sent in—three samples of cotton cake, and six samples of manure. All these samples agree fairly with what was stated on invoices and circulars."

TESTING THE CHEMISTS.

SEVERAL weeks ago the officials of the Health Department, says the *Birmingham Argus*, subjected a large number of chemists in the City to tests under the Food and Drugs Act. A very large number of prescriptions were "made up" to their order, and the analysts have since been very busily occupied in ascertaining whether the ingredients of the medicines were of the prescribed quality. The analyses have taken a long time, and they are not even now completed. As a consequence some of the chemists in the City are "on thorns" as to the result. Indeed the anxiety shown in one or two instances would seem to indicate that an unsatisfactory analysis is expected. The public, however, will benefit by any exposure which the Health Committee may find it necessary to make as a result of the "raid."

THE NEW SALE OF FOOD AND DRUGS BILL.

MR. DILLON (Mayo, E.) asked the First Lord of the Treasury, on May 27, when the Sale of Food and Drugs Bill would be introduced.

Mr. Balfour (Manchester E.): The Bill will be introduced this Session, but I do not think there is much chance of its being passed into law.

Mr. Dillon: May I ask the First Lord of the Treasury whether he will endeavour to get the Bill passed this Session, inasmuch as two Irish Bills have been blocked, and surely some of the time spent on those Bills might have been spent on this.

Mr. Balfour: It depends on a general survey of the business of the Session. I am afraid I cannot add anything to the statement I have already made. Of course, if it should unexpectedly turn out that there is a universal enthusiasm for this Bill, it may possibly be carried.

HACKNEY VESTRY AND THE FOOD AND DRUGS ACT.

THE ANALYST, Mr. Leo Taylor, presented his report for the past quarter, showing that out of 62 samples taken 20 were adulterated. The milk samples had been very bad, the additions of water being as high as 18, 19, and 21 per cent. This he considered was largely due to the small fines inflicted. The addition of 18 per cent. of water in one case was punished by a fine of 1s. and costs, 19 per cent. 3s. and costs, and so on.

MEAT.

AT Clerkenwell last week, William Down, butcher, of Holsworthy, Devonshire, was summoned for depositing in the shop of Harry Barnard, 92, Cowcross-street, St. Sepulchre's, on April 20, a carcase of mutton which was unsound and unfit for the food of man. The meat was seized by sanitary inspector Billing, of the Holborn Board of Works, and was the carcase of a ewe sheep which had suffered from inflammation of the kidneys. Defendant said he bought the body for 15s., and believed it to be good meat. Mr. Bros fined him £10.

SPIRITS.

AT Epsom, on May 31, Thomas Mayne, landlord of the Claremont Inn, Headley, was summoned for selling to the prejudice of Charles John Martin, the purchaser, an article of food, viz., brandy, which was not of the nature, quality, or substance demanded, being adulterated with 2½ per cent. of water over the average 25 per cent. allowed by law.—Mr. F. Rose, solicitor, appeared for the Epsom and District Licensed Victuallers' Protection Society, and pleaded not guilty.—Charles John Martin, inspector under the Food and Drugs Act for Surrey, stated that on May 3 he went into defendant's house and asked for half-a-pint of pale brandy, for which he tendered 2s. He was served from a jar on the shelf in the bar, and subsequently forwarded a third of the liquid to the public analyst for analysis. He now produced Dr. Stevenson's certificate, which showed that the brandy contained 27½ per cent. of water.—Mr. Rose said in his defence, he relied upon the case against the refreshment contractor at Chippenham Railway Station, where it was found that the consumption was so small that natural evaporation had reduced the strength of the spirit. Under the circumstances the magistrates dismissed the summonses, and the subsequent appeal was also upset.—Defendant, on being sworn, said the brandy in question was a portion of two gallons which he received in September, 1896, when he broke it down from 12 to 25 under proof. The further reduction must have been caused by evaporation.—Mr. Martin submitted that the appeal in

the Chippenham case was made on the legality of the summons.—The magistrates were of opinion that the case had not been proved, and, bearing in mind the decision in the case quoted, they dismissed the summons.—William Johns, of the Cock Hotel, Headley, was summoned for selling, on the same day, half a pint of Scotch Whisky, which was 27 degrees under proof, or 2 degrees above the standard.—Mr. Martin deposed that he made the purchase of defendant's son, and now produced the certificate of the public analyst, which certified that the whisky was 2 degrees above that allowed by the Act.—In cross-examination by Mr. Rose, who defended, witness said he did not see the notice (produced) hanging up in the bar. He, however, looked for one, as was always his practice, especially in the Epsom district.—George Hooker, assistant to Mr. Martin, said he entered the Cock on this occasion, and also looked for a notice calling customers' attention to the strength of the spirits retailed over the bar, but he did not see any.—The defendant stated that the printed notice put in had been hanging in a conspicuous place in his bar for three years. Anyone entering the bar could see the notice without specially looking for it, and it was there when the two witnesses visited the house. He did not think they wanted to see it (laughter).—William Johns, son of the defendant, said he served Mr. Martin, who could not fail to see the notice if he looked in front of him, as it was exposed in the middle of the bar.—Frederick Stovell corroborated.—Mr. Rose said if the Bench were not satisfied with the evidence adduced he could call half of Headley to prove that the notice had been continuously exhibited.—This summons was also dismissed.

At Worship Street on June 3, Edwin Gray, a licensed victualler, of 7, Fleming-street, Kingsland-road, was summoned, before Mr. Cluer, by Charles Quelch, Inspector under the Food and Drugs Act for St. Leonard's, Shoreditch, for selling gin, and also whiskey, which was adulterated by water being added thereto so as to reduce the gin and whiskey more than 35 degrees under proof.—Mr. Margetts, solicitor, who appeared on behalf of the defendant, had taken objection to the summons on the ground that there was exhibited in the bar a notice that the spirits sold at the premises were adulterated and that such notices were in such conspicuous positions that they could be seen by all customers.—Mr. Cluer dismissed the summons.—Mr. Margetts pressed for costs, and Mr. Cluer said he would allow £2 2s.—Joseph Collieu, licensed victualler, of 45, Pitfield-street, Hoxton, was summoned also by Mr. Quelch for selling gin and whiskey more than 35 degrees under proof.—Mr. Maitland, solicitor, appeared on behalf of the defendant, and called witnesses to prove the notice that spirits sold at the establishment were adulterated was in a conspicuous position in the bar.—Mr. Cluer dismissed the summons, but declined to grant costs.

At Prescott Petty Sessions, on June 1, Henry William Hinton, the licensee of the Rose and Crown Hotel, Huyton, was charged with selling whiskey not of the nature and quality demanded.—Sergeant T. J. Knott stated that on April 26 he bought a pint of Irish whiskey from Mrs. Hinton, defendant's wife. The county analyst had certified that the whiskey was 33 degrees under proof.—Defendant said it was a mistake. His wife sold the whiskey before he had tested it. He had only been a licensed victualler about three months.—Defendant was fined £2 and 10s. costs and the analyst's fee.

At Workop, on June 2, Thomas Colver, landlord of the Victoria Hotel, Workop, was charged with selling on May 29 adulterated whiskey. The defendant was represented by his wife.—Inspector Garforth said he bought at the hotel 8d. worth of whiskey. Dividing it, a portion was subjected to the usual test, and was found to contain 3.1 parts of added water, 96.9 parts of

whiskey, and it was 25 degrees under proof.—This statement was admitted by Mrs. Colver, and she explained that she had mixed too large a quantity at a time. The keg in which the whiskey was kept was in a room in which there were seven gas-jets, and the heat from these had a strong tendency to diminish the strength of the whiskey.—A fine of £2 and costs was inflicted.

At Gainsboro' Petty Sessions, Elizabeth Cordon was charged with selling adulterated gin at East Ferry on May 5. Fined 15s. and 4s. costs.—A similar charge against James Hemingway, of the Windmill Inn, Gainsboro', was adjourned.

At Swansea, on June 1, Mary Thomas, of the Brewers' Arms, Morriston, for selling rum 34 deg. under proof, was, in spite of the contention of Mr. Bull that a notice in her bar covered the matter, fined 10s. and costs.—Rachel Daniel, Station Inn, Landore, for watering her rum to the extent of 28½ deg. under proof, was fined 5s. and costs.—Arthur Whapham, the manager, and Wm. R. Hughes, the licence-holder of the St. George Hotel, Walter-road, were fined 10s. each and costs for selling whiskey to which 29 deg. of water had been added. Mr. Hughes stated that the manager was responsible, and that he had since discharged him.—James Morris, of the Chili Arms, St. Thomas, was fined 10s. and costs; and David Williams, of the Troubadour, 20s. and costs for having dealt in a similar manner with certain whiskey vended by them.

At Sevenoaks, Mary Ann Barker was summoned for selling half-a-pint of whiskey which was not of the nature, substance, and quality demanded by the purchaser, at Sevenoaks, on May 4.—Mr. Barton, of the firm of Palmer and Wardley, appeared for the defendant.—Supt. Holman proved previous convictions for selling adulterated whiskey.—Fined £1 and 10s. costs.—Charles Sayers was summoned for selling half-a-pint of gin under similar circumstances at Otford, on May 4.—Defendant, who pleaded guilty, was fined 10s. and 10s. costs.—Frederick W. Keywood was summoned for selling half-a-pint of brandy which was not of the required strength, at Otford, on May 4. He was also summoned for selling half-a-pint of whiskey which was also under proof.—Mr. Barton appeared for defendant, who was fined £5 and 10s. costs for adulterated brandy, and £1 and 11s. costs for the whiskey. The Chairman said the bench considered the case was a bad one.

At Swadlincote, James Bask, of the Forester's Arms, Swadlincote, was fined 5s. 6d. and costs, 23s. in all, for selling diluted whiskey.

At Berkhamstead, James Pearce, of the Robin Hood, Tring, was charged for selling adulterated whiskey.—Inspector Rushworth gave evidence as to the offence.—The analyst proved that there was an addition of 10 per cent. of added water.—Fined, including costs, £2 3s. 4d.

At the Ormskirk Petty Sessions, on June 4, Hugh Cross, the licensee of the Beehive Inn, Skelmersdale, was charged with selling one pint of whiskey which was 29 per cent. under proof.—Mr. Jones, for the defendant, said that he pleaded guilty, and pointed out that 25 per cent. was allowed, and the whiskey in this case was, therefore, only 4 per cent. under the allowance. On the day of the offence, May 26, the defendant left home, and whilst he was away his wife mixed the whiskey and added too much water. The defendant's house was always well known for the good quality of the spirits sold there previous to this occasion.—The defendant was fined 40s. and costs.

MILK.

At Liverpool, on June 2, Thomas Jones, of 3, Wolf-street, was summoned for having, on May 14, sold new milk which had been deprived of part of its cream, and

was fined 20s. and costs.—Thomas Marshall, of 41, Harlow-street, was fined 20s. and costs for having sold skimmed milk which had been adulterated with a small quantity of water.—Thomas Roberts, of 81, Hawdon-street, Smithdown-road, was summoned for having refused to sell a sample of milk to Inspector Baker. The latter on a Sunday morning accosted the defendant who was carrying a milk can. He asked him if it was new milk that he was carrying, and the defendant said it was skimmed milk. He refused to sell a sample, on the plea that he required all the milk he had for his customers. The defendant now stated that he was in a bad temper at the time he spoke to the officer. The only liquid he had in the can was a noggin of whiskey, which he was taking to one of his customers. That was the reason he did not let the officer see what was in the can. The defendant added facetiously that it was a sort of milk that stirred up the nerves—it was his favourite drink.—Inspector Baker admitted that he saw no traces of milk about the can.—Mr. Stewart said that, that being so, there was no offence. The case would be dismissed.

AT North London, Archibald Carter, a milkman, of Church-street, Stoke Newington, was summoned by the Stoke Newington Vestry (for whom Mr. Webb appeared) for selling milk to Sanitary-Inspector Matthews from which the certificate said 30 per cent. of the cream had been abstracted. Mr. C. V. Young, for the defence, said that the milk required stirring in the warm weather so as to keep it of equal quality. The cream had a tendency to rise more rapidly in the warm weather, and if the dealer was not careful the milk was poor indeed. Mr. D'Eyncourt: One customer might get all the cream and the other none at all. (Laughter.) It was stated that this was the first time that the defendant had been summoned, and he got off with a fine of 10s. and 2s. costs.

AT Kensington Petty Sessions, John Douglas was summoned by the Chelsea Vestry for selling milk adulterated to the extent of 25 per cent.—Mr. Grant, the inspector, proved the purchase from a barrow in the street.—Defendant said the people on his round "wanted a lot for their money."—A magistrate: So we all do.—Mr. Halswell: And so you adulterated the milk to the extent of 25 per cent.—The Inspector having stated that the business was a very small one, the Bench inflicted a fine of 20s. and costs.

CAN A FARMER BE A COWKEEPER?

INTERESTING CASE AT SOUTHPORT.

AT Southport, on June 2, Henry Baker, farmer, Nelly Baker's-lane, was summoned, under the Contagious Diseases (Animals) Act of 1878, for keeping a larger number of cows in his shippon than that for which it was registered. The Town Clerk (Mr. J. Davies Williams) prosecuted on behalf of the Corporation, and Mr. Horridge defended.—The Town Clerk said the offence came under Regulation 3 of certain Regulations made by the Corporation in 1890. This provided that there should not be a larger number of cows in a shippon than would allow of 800 cubic feet of air space for each cow. The defendant was registered as a cowkeeper in May, 1896, and was informed that he could keep only four cows in his shippon, which contained 3,838 cubic feet of air space.—William Halsall, inspector, deposed to having found nine cows in the shippon.—Mr. Horridge, in defence, pointed out that the Divisional Court had decided that a farmer could not be summoned under similar regulations in London at all, because they assumed, and he thought with a considerable amount of reason, that the Act was intended to deal with people who were simply cowkeepers. A farmer might, in the course of his business, keep cows and sell milk, but that did not constitute

him a cowkeeper. After submitting that the shippon was sufficiently ventilated by reason of the fact that an aperture in the roof led into a large loft above, Mr. Horridge went on to contend that the regulation of the Corporation was absolutely bad. Southport was a borough which included a good deal of rural district, and if they stepped across the boundary they found that throughout the county there was no such regulation. The regulation was expressly outside what had been delegated to local authorities by the Privy Council, which was simply power to deal with the question of ventilation. If the shippon was properly ventilated the defendant had not committed any offence.—The Town Clerk argued that it would be absurd to conclude that because a man was a farmer he could not be a cowkeeper. As the defendant kept cows and sold milk he was clearly a cowkeeper within the meaning of the Act.—After a lengthy deliberation the magistrates decided that the defendant, although ostensibly a farmer, was a cowkeeper within the meaning of the Act, and that the regulation was good. They imposed a fine of 20s. and costs.

BUTTER.

AT Faversham, on June 2, James Henry Watt, grocer, St. Mary's-road, was summoned for selling adulterated butter. A pound of shilling butter was purchased by Supt. Capps, and on being analysed it was found to contain 86 per cent. of foreign fat.—Defendant was fined 10s. and costs.

AT Preston, on June 4, Robert Plumb, shopkeeper, of Peel Hall-street, was fined 30s. and costs for selling adulterated butter, which, on analysis, was found to contain over 10 per cent. of water and 80 per cent. of fat other than butter. Wm. Brown, shopkeeper, of Fylde-street, was also fined 30s. and costs for a similar offence. The analyst's certificate showed the substance sold as butter to contain 10½ per cent. of water and upwards of 85 per cent. of fat other than butter.

AT North London, Arthur Deacock, provision merchant, of Seven Sisters'-road, was summoned for selling "butter" to which 10 per cent. of foreign fat had been added. The summons was taken out by Mr. A. L. Bridge, inspector under the Food and Drugs Act, for the Middlesex County Council, who said he purchased half a pound of "butter" and sent a third portion to the public analyst, who certified as aforesaid. Mr. C. V. Young, who defended, said it was no doubt an inadvertence on the part of one of the shopmen in mixing up margarine with the butter, as the bulk of the two articles were near; or else, the article was adulterated when he got it. He could not say which bulk it came from, and therefore could not locate the sample with any particular purchase. Mr. D'Eyncourt elicited from the defendant that he had not taken steps to ascertain from whom he purchased this particular lot, nor had he taken the trouble to have another portion of the same lot analysed to see if it was all alike. In reply to Mr. Bridge, the defendant said the shop from which the sample was got was a new one, but there was no particular competition. He paid a fair butter price for the article in question. Mr. D'Eyncourt fined the defendant £5 and 2s. costs, and dismissed a summons which had been taken out against him under the Margarine Act, for exposing for sale margarine without a label declaring what it was.

HACKNEY VESTRY AND SOMERSET HOUSE.

MR. COHEN, referring to the cases under the Food Adulteration Acts which had recently gone against the Vestry, said these cases had entailed heavy expenses upon the ratepayers, which he did not think would have

happened if proper investigations had been made before they were taken into Court. The cases which had been dismissed were not presented in a proper manner, and he thought they should receive greater investigation than hitherto.

Mr. Hulland said in the milk case which was dismissed their analyst sent samples to three other analysts, and they all agreed with him that it was adulterated. The sample which was sent to Somerset House, and which was pronounced to be pure, was in such a state that it could not be properly analysed. He felt certain that their analyst was right, and he was afraid that the result of the decision of the magistrate would be that traders would be able to adulterate up to 10 or 12 per cent. with impunity.

Mr. Geo. Taylor, the analyst, said the magistrate was obliged to accept the evidence of Somerset House, as the case had been referred there.

Mr. Warner said they ought to have some consideration for their traders.

Mr. Denham said they did not harass the traders at all, because every possible precaution was taken. It was generally admitted that the present methods of analysis at Somerset House were faulty and out of date, and they were trying to agitate in favour of a better method. So long as magistrates would persist in supporting Somerset House it was no use their doing anything in the matter.

Mr. Windsor defended the action of the inspector, and said it was a pity they had not the plan adopted in France, where a trader convicted of adulteration had to put a large bill in his window announcing that fact for twelve months.

The question then dropped, and the Vestry adjourned.

THE COMPOSITION OF CHOCOLATE LOGS.

At the Belper Petty-sessions, on June 3, Sophia Jane Whawell, of Heage, shopkeeper, was charged with selling adulterated "chocolate chumps," on March 19.—Mr. R. S. Clifford, Derby, prosecuted, and said a sample of chocolate chumps was taken from this shop. On analysis the sample was found to contain over one and a-half per cent of paraffin wax. This was a most dangerous thing for anyone to eat or swallow. To melt the wax a heat of 124 degrees had to be obtained. The normal heat of the body was only 98.4, so it was impossible to digest the wax. To children it was a very dangerous substance, and the inspector cleared the defendant out of her whole stock.—Mr. J. White, the county analyst, deposed that the chocolate contained at least one and a-half per cent. of paraffin wax. The melting-pan had to be heated to 124 deg. Fah. to separate the wax from the other ingredients. The wax was the same as that used for candles of the usual make. It was absolutely indigestible, quite as much as the proverbial India rubber or paving stone. It was liable to cause a stoppage or set up inflammation of the stomach. The process of extraction of the wax from the chocolate was by means of the heat of 124 deg., tempered with caustic potash and strong sulphuric acid.—The Bench said it was very dangerous to children evidently.—Mr. White stated that the coating of wax was, he believed, to prevent the action of air on the inside portion of the chocolate.—As it was the first case, a nominal fine of 1s. and costs was inflicted.

FOOD ADULTERATION IN EAST FINSBURY.

MR. A. W. STOKES, Public Analyst to the Vestry of St. Luke's, Middlesex, in his last issued quarterly report, says:—"One vendor of a sample of 'butter' was prosecuted by summons taken out under the Margarine Act and the Food and Drugs Act, because his sample contained 98 per cent. of margarine. A fine of only 10s. was inflicted. The seller of another sample of 'butter,' which was found to contain 85 per cent. of margarine, escaped with a fine of 1s. For

selling as butter that which in reality was 90 per cent. margarine, the vendor was fined 5s. With regard to the adulterated milk, one sample was found to contain 6 per cent. of added water. The vendor of the milk had his portion of the sample analysed, with the result that added water was found, but to a less extent. On appeal to Somerset House the chemists there, analysing the sample when it was five weeks' old, said, "The sample does not afford satisfactory evidence of the presence of added water."—Case was dismissed. Seventy-nine samples were analysed in East Finsbury for the quarter, these including: 34 of milk, 15 of butter, 4 of lard, 4 of coffee, 3 of carbolic powder, 2 of carbolic acid, 2 of pepper, 3 of whiskey, 2 of brandy, and 1 each of gin, ginger, curry powder, rhubarb, Epsom salts, castor oil, cod liver oil, port wine, and sugar. Nine of these were found to be adulterated.

MARGARINE.

BEFORE Sheriff Davidson, in Hamilton, on June 1, Thomas Stark, grocer, Uddingston, pleaded guilty to a contravention of the Margarine Act, 1887. The Sheriff imposed a fine of £3, including expenses.—Robert Harper, grocer, Stonefield, Blantyre, pleaded guilty to a similar contravention, and the Sheriff, in imposing a fine of £2, including expenses, regretted that he was forced by statute to convict, as there was obviously no intention on respondent's part to defraud the public.

COFFEE.

AT Birmingham, on June 4, Lucy Bates, provision dealer, Vere-street, was summoned for selling coffee containing 45 per cent. of chicory without disclosing the adulteration.—A fine of £1 and costs was imposed.

LIME JUICE.

AT Liverpool, on June 2, George Patterson, 66 and 68, Myrtle-street, was summoned for having sold a bottle of lime-juice cordial, purporting to be free from mineral acids and substances, which, on analysis, was found to contain sulphuric and boric acids in excessive quantities.—The defendant pleaded that he sold the stuff as he bought it.—Mr. Stewart said he did not propose to decide that no acids should be used in these drinks, as no doubt a certain amount was necessary as an antiseptic. In the present instance, however, the quantity was excessive. Defendant must pay a fine of 5s. and costs.

WORKHOUSE MILK IN DUBLIN.

SIR CHARLES CAMERON'S analysis of nine samples of milk supplied by the new contractors to the South Union Workhouse. In the majority of cases the samples were very poor, and there was not even one up to the average. Capt. Boyd said it was very unsatisfactory to find that among the new contractors there was not one whose milk was reported good. Mr. Mooney said although the milk was not good it did not appear that there was a case for a prosecution, and he suggested that the clerk be instructed to write to the contractors cautioning them with regard to the quality of the milk they were supplying to the house. This course was agreed to, and after transacting routine business the meeting adjourned.

CERBERUS WOULD NOT TAKE THE BOP.

At a meeting of the Baptist Union at Pittsburgh recently, the Rev. Mr. Cossum, a baptist Missionary to China, declared that in his opinion it would not be right to accept a gift of a quarter of a million dollars proffered to the missionary cause by Mr. Rockefeller, the oil merchant, until the would-be giver has "purified" himself. The rev. gentleman was referring to the methods by which Mr. Rockefeller obtained, or is reported to have obtained his wealth.

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THE PASTEUR (CHAMBERLAND) FILTER.

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M. DE FREYCINET (Report of Minister of War to President of the French Republic, *Journal Officiel*, February 14, 1892), says:—"Wherever the Pasteur Filter has been applied to water previously bad Typhoid Fever has disappeared." At this date over 200,000 quarters of the French Army were fitted with Pasteur Filters.

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Food and Sanitation.

SATURDAY, JUNE 19TH, 1897.

GIGANTIC SUBSTITUTION FRAUDS.

For some weeks it has been known that Chicago contains hotbeds of patent medicine and liquor counterfeiters, but it has not been until the past few days that the full depth of the iniquity has been unearthed, although detectives have been at work for some time. About three months ago the Mooney and Boland Detective Agency here was retained by the Carter

Medicine Company, of New York, to investigate counterfeits of its goods. The detectives unearthed this gang and brought its members to justice. The following week Mooney and Boland were engaged by the manufacturers of Antikamnia, and were successful in discovering a gang who were counterfeiting this article. About 600,000 tablets made from French talc were recovered. The tablet machine, dies, etc., were seized at the same time in the room at No. 7, Adams-street, where the spurious goods were being manufactured. The following men were indicted by the grand jury: H. F. Flannery, R. C. McCabe, Victor Dumont and H. A. Bourne. Flannery is the man, it will be remembered, who operated the Champlain Pharmacy in the Champlain Building on State-street, and whose arrest created quite a flurry at the time. The bogus products found in Chicago consist of "Antikamnia Powdered," "Antikamnia Tablets," and "Antikamnia and Codeine Tablets." This gang had tried to extend its operations to other States, one consignment of goods having gone to C. O. Paine, of Louisville, Ky., an agent, who was indicted with the rest. The goods shipped to Paine were held by the American Express Company, which received notice of their character, and have been confiscated. Mooney and Boland were next appealed to by Rigaud and Chapoteaut, of Paris, through Mr. Fred S. Mason, to determine whether or not their goods were being counterfeited, and, if so, to what extend and by whom. It was found that Dr. John Flood, H. Page Guyton, and E. C. Bottume were the ones engaged in the manufacture and sale of the spurious Santal-Midy. In the genuine article the name "Midy" is stamped from the inside of each capsule, and cannot be erased. In the capsules recovered by the detectives the name is stamped from the outside and can be rubbed off. It was found that more than half of this drug now on sale in Chicago is spurious.

Next came the W. T. Hanson Company, of Schenectady, N.Y., who retained the agency, with the very recent result that another gang of counterfeiters has been found, and 250 pounds of spurious "Dr. Williams' Pink Pills for Pale People" have been recovered. At the same time were found about 20,000 circulars, labels, boxes, and all other advertising matter, being exact counterparts of the genuine labels. The steel engravings and plates from which this matter was printed were also recovered. In this raid the discovery was made that W. F. Severa's Headache Wafers were being counterfeited, and about 5,000 labels, an equal number of circulars and boxes, and all the steel plates from which these were printed, were recovered. Mr. Louis Gakel, of the Kohler Medicine Company, of Baltimore, Md., came to Chicago a short time ago and held a conference with the Mooney and Boland Agency. As a result, two complete sets of plates, 15,000 circulars, wrappers, and envelopes, together with the usual advertising matter packed with the goods, and 400 gross of imitation Kohler's Headache Powders ready for delivery, were captured and confiscated. The forged *fac-simile* signature of the Kohler Medical Company was on every package. Next came Mr. Brent Good, president of the Carter Medicine Company, in response to a telegram from the Agency. On his arrival in the city he found that the Mooney and Boland detectives, under the management of Mr. William J. Sutherland, in charge of the Western agency, had captured a complete set of steel plates for printing the labels, folders, circulars, and wrappers of the Carter Medicine Company, found and taken 200 pounds of spurious "Carter's Little Liver Pills" and arrested the counterfeiters. In the same place as this last discovery of counterfeits were found a complete set of electrotypes for the printing of phenacetine circulars and labels, together with a large quantity of labels and circulars already printed, in every way exact counterparts of those used by Messrs. Schieffelin and Co. The two latest arrests are those of

Joseph Platt and Otto Doerlamm, the former of whom is now in the county gaol, and the latter has given bonds in the sum of \$2,000. The names of both will go to the grand jury together. The list of those now under arrest for counterfeiting patent medicines is as follows: H. F. Flannery, H. A. Bonne, Victor Dumont, Edward C. Bottume, R. C. McCabe, H. Page Guyton, Dr. John Flood, H. G. Paine, Joseph Platt, and Otto Doerlamm. The last-named is, or was, employed by Druggist Iver L. Quarles, 1086 Milwaukee-avenue. Your correspondent has samples of all the goods, labels, and wrappers taken, and is in a position to say that in all respects, except as to the composition of the goods, they are in every case exact imitations of the genuine. Three separate gangs of counterfeiterers have been broken up, 135 plate and electrotypes taken, together with immense quantities of spurious goods, and thousands of forged labels and wappers. Seven men are now under indictment, two under arrest, and more arrests will follow in a few days. Furthermore, those who printed the labels and made the plates are known, and there is evidence that some of the druggists in whose stores spurious goods were found had knowledge of the character of the articles they were offering for sale. There is one room in the Mooney and Boland Agency that looks like a patent medicine factory after a fire. There is a roomful of counterfeits, and it is the most astonishing evidence of audacity on the part of the counterfeiterers that one could well imagine. The plates, electrotypes, etc., are models of fine workmanship, and the circulars cannot be improved upon as copies of originals. Mr. Sutherland and his assistants cannot be too warmly congratulated, says the *Pharmaceutical Era*, upon the success and vigour with which they have pushed these cases.

KAILOSOPHY.

A correspondent of *The Westminster Gazette* writes:—

"Strong, healthy people can eat almost anything with impunity and thrive on it. A leading case is Hugh Miller getting strong and wise, as a quarry lad, on oatmeal and water only. Thousands of hard-working men still do the like; for example, the Turkish troops in Thessaly lately. They had plenty of exercise in the open air, trying to catch up with the Greeks. I myself in Mexico have lived on bananas for a fortnight (not the wretched things one sees in London, but the great copper-coloured kind, absolutely delicious), but then I was eight hours in the saddle daily. Were I to eat a couple of bananas to-day I should have rheumatism in the right arm, shoulder, and neck to-morrow; that pet complaint of vegetarians troubled me off and on for forty years. I got rid of it completely by eating much meat, little other food, and drinking a pint of hot water morning and evening. Let people try that for themselves; it costs little, and, if it suits them, persevere in it. Or eat vegetables solely if that suits them better. Individual experiment, not newspaper controversy, should settle problems of diet—for doctors give drugs, not counsel, in the matter; only, weigh this advice: Never try to mix up grub and ethics. Teetotalers do that sort of thing and lose by it. I have a neo-Buddhist friend who calls fruit-eaters cannibals, uses strong language about Covent Garden Market, and argues that since the principle of life in the animal and vegetable kingdoms is constant and interchangeable it is a sin to take the life of a potato for our own sensual gratification. He thinks vegetables, fruits, etc., suffer, love, live, die, just like cattle and men, and grows pathetic over the torments and sorrows of young Brussels sprouts torn from the mother-stem.

"One thing my neo-Buddhist friend is especially angry about: the 'cruel practice' which gardeners call 'grafting' or 'budding.' He says different trees live on an entirely different ethical plane; so when you graft, say,

one of the new varieties of apple on to a wild apple tree, it is like grafting one of the Jameson Raiders on to a member of the Pioneer Club—an inhuman act. He says, too, that if the sap, or life blood, of trees and plants were red instead of colourless, none of us would eat fruit or cereals. But does he talk sense?"

LIVERPOOL AND TUBERCULOSIS MILK.

THE proceedings of the Health Committee contained a report (already published) by the Medical Officer of Health on tuberculosis as affecting the milk supply of the city, and also a report of the Town Clerk respecting the powers of the Corporation in reference to the sale of milk of animals affected with tuberculosis and in relation to the regulation of dairies, cowsheds, and milkshops.

Mr. Shelmerdine, at whose instance the reports were ordered, spoke of the extreme importance of the subject of tuberculosis, which was by far the most deadly of diseases in this country. He believed that diseased milk was largely responsible for the great death rate among artificially-fed children. The report now before the Council showed that 2½ per cent of Liverpool milk was tuberculous, while 29 per cent. of the railway milk was affected; and yet there had been no prosecution for selling diseased milk. He thought that cows ought to be examined by veterinary surgeons, who would give certificates of health, without the production of which the Corporation should refuse to licence shippings. Of course, they could not deal with country cow owners, but the Liverpool retailer had no more right to sell diseased milk than he had to sell diseased meat. (Hear, hear.) The retailer ought to have a guarantee that the milk is free from disease, accompanied by a veterinary surgeon's certificate showing the cows giving the milk to be healthy. In this and other ways they should do their utmost to rid the milk supply of everything that was obviously detrimental to public health.

Dr. Clarke considered that the report was on the whole a most reassuring one, and that members of the Council ought to avoid creating panic in the public mind unnecessarily. The disease in many of the samples, though sufficient to kill a susceptible animal like the guinea pig, would do no harm to a human being. The Liverpool milk supply was better than it had been for 20 years, and was gradually improving. It was not fair to infer that a large proportion of the deaths of children from consumption was due to milk, and it was well to remember in any case that by boiling for a few seconds milk became perfectly safe. If proper attention was paid to the sanitation of dwelling-houses there would be less consumption.

GRIMSBY SANITARY COMMITTEE ON THE WASTE OF DISINFECTANTS.

AT the last meeting of the Sanitary Committee, the Sub-Sanitary Committee appointed on the 10th ult. to report on the duties of the sanitary inspector, the use of disinfectants, etc., presented to the Committee their report, which was taken as read. The Sub-Committee recommended that in future no Pino-Phenol or disinfecting powder be purchased except by the order of the Medical Officer of Health, but that the Sanitary Committee be recommended to require the contractors to use quick-lime instead of this expensive powder; that in future the Sanitary Inspector be held responsible for the ordering of all stores for the Health Department, and that for all outlays of upwards of £1 he shall apply to the Sanitary Committee for authority to make the necessary purchases, and the Chairman of the meeting shall sign an order for the same.

Mr. Maddock, in moving the adoption of the report as a member of the Sub-Committee, went over the reasons for the recommendations. He quoted a large number of accounts and figures, showing there had been extravagant expenditure on disinfectants, and asserted that there had been no requirement for them. They were given away wholesale without an order from the Medical Officer. There was no necessity, he said, for this system of using disinfectants to be continued any longer. If they were really wanted the Medical Officer would give the order. It appeared from the books that £6 a month had been thrown away on these disinfectants. If this Committee and other Committees would be careful the Corporation would next time be in a position to drop the rates a penny or twopence in the pound.

The Chairman thought the Sanitary Inspector should be allowed to state whether the disinfectants he had used were required.

Mr. Tyson did not see why they should want the opinion of the Sanitary Inspectors. He seconded the adoption of the report. For years he had thought it profound stupidity to use this powder when all that was required was a bucket of water. As to the first clause of the report, he pointed out that these things had been in the hands of the Borough Surveyor previously. The energetic men on the Rates Committee who had found out the necessity for this investigation were anxious "to have a grasp at" the members of the Sanitary Committee.

FACTORY OWNERS AND FIRE ESCAPES.

Dr. E. G. ANNIS, Medical Officer of Health, Huddersfield, in a report just issued says:—"In consequence of a certain amount of pressure from the Home Office authorities, the Sanitary Committee have now decided to fulfil the duties laid upon them by the Factory and Workshop Acts, 1891 and 1895, which state as follows: Factory and Workshop Act, 1891, section 7, par. 2—'With respect to all factories . . . it shall be the duty of the Sanitary Authority of every district, as soon as may be after the passing of this Act and afterwards from time to time, to ascertain whether all such factories within their district are provided with such means of escape as aforesaid (par. 1 defines this more fully, i.e., "The factory to be provided on the storeys above the ground floor with sufficient means of escape in case of fire"), and in the case of any factory which is not so provided, etc., to order the same to be provided within a specified time.

"For the purpose of carrying out this work, a sub-committee has been appointed to examine all the factories and decide upon the requirements of each case. As showing how few factories in this district already comply with the requirements of these Acts, it may be stated that this sub-committee visited about 20 such factories, and only found two of them coming up to the requirements. These inspections have further necessitated many revisits on the part of the Inspector of Nuisances and myself to discuss various projects which the owners of the mills were quite willing and anxious to carry out—almost anything, in fact, except just what was judged to be necessary in their identical case.

"The prevalent idea appeared to be that the mere dream of a fire occurring in their identical mill was nothing less than a phantasy attendant upon a disordered mind. Practical demonstrations were even shown in further proof of the absolute non-inflammability of their premises.

"Seeing that this unbounded faith was expressed by owners of all classes of mills, including woollen, cotton, engineering, and even where carpentering was carried on, with a large store of wood in the top floor of a three-storey building, it certainly seems very strange that such a thing as a mill fire should ever occur."

A YEAST PROSECUTION.

At Auckland, on May 31, John Rawe, grocer, Toft Hill, near Bishop Auckland, was charged with selling adulterated yeast. Defendant pleaded not guilty. Mr. Thompson said he visited the defendant's premises on May 7, and purchased three-quarters of a pound of yeast. He produced a certificate from the County Analyst in which it was stated that the yeast was adulterated with 28 per cent. of potato farina, which was not a natural constituent of yeast. Defendant, in reply to a question from the magistrates, said he sold the yeast as it came to him from the merchant in Hull with whom he dealt. Defendant was fined 10s., including costs.

ADULTERATION IN ROCHDALE.

ONE HUNDRED AND FORTY-ONE samples of food-stuffs were examined during the past year, with the result that three vendors were cautioned, and six had proceedings instituted against them, of whom four had fines inflicted upon them. The fines amounted to £4 15s. Many of the other vendors barely escaped prosecution.

EAST SUFFOLK AND THE FOOD AND DRUGS ACT.

At the quarterly meeting of the East Suffolk County Council the analyst stated that he had analysed eight sugars, four butters, and two lards, all of which were genuine, but in one butter there was 50 per cent. of foreign fat. A prosecution followed, and a conviction was obtained. Nearly the whole of the samples taken came from Lowestoft, a fact of which the Lowestoft councillors complained, stating that their constituents were no worse than any other tradesmen, and ought not to exclusively receive the polite attentions of the sample-purchasing inspector. On the other hand, it was also pointed out that only one case of adulteration was found, and therefore there was not any need to make such frequent analyses.

THE NEW ADULTERATION ACT.

THE Central Chamber of Agriculture is somewhat annoyed that a Bill to deal with the adulteration of food products has not been introduced by the Government this Session. A resolution declaring the pressing need of legislation on this subject was unanimously passed by the Central Chamber, and Mr. Jeffreys intends to press Mr. Balfour for information when the matter will be taken up. An assurance that it should have an early place in the programme of next Session will be sought. Most of the members of the Chambers are Unionists, and they feel that they are entitled to some consideration.

THE PUBLIC HEALTH (SCOTLAND) BILL AND THE STATUS OF SANITARY INSPECTORS.

THE Grand Committee of the House of Commons on Law resumed, on June 3, consideration of the Public Health (Scotland) Bill, Sir James Fergusson presiding.

It was agreed that "the medical officer should be described throughout the bill as the medical officer of health."

Dr. Clark moved the deletion of the definition of sanitary inspector. He contended that if there were to be sanitary inspectors, Parliament should see that they were qualified men. No qualification was required at the present time, and any butcher, baker, or tailor might be appointed to do the work.

Captain Sinclair pointed out that the present law was that the sanitary inspector could act independently of the medical officer, and the result was that the sanitary

administration in certain areas of the country was paralysed. Some advance in the sanitary inspector's qualifications and his relation to the medical officer was absolutely necessary.

After some remarks by Mr. Renshaw and Sir William Priestley, Dr. Clark withdrew his amendment in order to raise the question on the report stage of the bill.

MR. KEARLEY'S ADULTERATION ACT.

"The present Bill before the House of Commons is," says the *Cowkeeper and Dairyman*, "a hurriedly and badly conceived measure, which, taken as a whole, is calculated to make confusion worse confounded. From information received it is, we understand, being relegated to the limbo of ill-begotten projects, so that the trade may take heart and breathe freer from the knowledge that their interests, reputation, and business are not to be left to the undesirable legislation of Mr. Kearley and his particular friends. The apparent inadequacy of this measure to deal with the difficulties that have arisen under the previous act are particularly ludicrous, and display to the experienced legislator the incompetency of an apprentice, and thus we can easily understand the apathy with which Mr. Kearley's efforts to become famous at the expense of better men than himself has so miserably failed. He may be very anxious to see the principal dairymen of his constituency incarcerated for three months for selling pure milk as the cow gave it, but which failed to satisfy his protégé the analyst, and we take this opportunity of stating that the interests of the analyst and lawyer are more largely considered by the Bill than the interests of the public or tradesmen.

THE LOBSTERS' JUBILEE.

THE lobsters are having a Jubilee this year. Generally they die in two or three days when kept out of water, but a Billingsgate lobster specialist has discovered a "secret system" of keeping them alive, and he has 3,000 now under treatment for Jubilee day. The *Globe* states: "Another specialist says that the way to keep lobsters alive is to put them in a coal-cellar with some beer, when 'they'll crawl over the coals and the beer will nourish them.' It's a poor heart that never rejoices, the lobster must think, as he jostles his grimy comrades among the coals, waiting for the Jubilee cauldron."

SPIRITS.

AT Ashborne, on June 5, Sarah Bridden, of the Plough Inn, Compton, pleaded guilty to selling whiskey four degrees below the standard allowed.—

Captain Sandys stated the facts and produced the analyst's certificate.—Defendant pleaded that she did not know it was under proof.—Fined £1 and 17s. 6d. costs, including 10s. 6d. analyst's fee.

AT the Croston Petty Sessions, on June 9, John Harrison, landlord of the Eagle and Child, Bispham, Mawdesley, was charged with selling adulterated whiskey and gin.—Joseph Jackson, an inspector, stated that on May 24 he visited the public-house, and asked for a pint of whiskey and a pint of gin, which were given him. He submitted them to the public analyst, with the result that the whiskey was found to contain 14 per cent. of water, and the gin 9 per cent. of water.—Defendant's brother, Joseph Harrison, stated he had added water to the liquor for the past twelve months, according to instructions, and he was totally ignorant that it was wrong.—The magistrates fined defendant 10s. and costs in both cases.

AT Cardigan on June 9, on the complaint of Deputy Chief Constable (inspector under the Act), John Rees, White Lion, Aberporth, innkeeper, was fined 20s. and costs for selling whiskey diluted with 25 per cent. of water.

WM. FOX PEARSON, landlord of the Queen's Hotel, at Newbold Moor, was charged at Chesterfield by Colonel Short, Inspector under the Food and Drugs Act, with selling, by the hands of a servant, on May 11, whiskey to which 8 per cent. of water had been added.—For the defence it was stated that the best whiskey was always purchased, and water was added precisely as it had been for 21 years past. The water had evidently settled to the bottom.—The Chairman: I suppose you were short of whiskey, and added more water.—Fined 5s. and costs.

AT Retford, on June 12, John Quickfall, of the Eyre Arms, Rampton, was fined £2 for selling gin below the strength required by the Act.—Joseph Robinson, of the Red Lion, Treswell, was fined £3 for a similar offence.—The cases were proved by Inspector Garforth.

AT Gainsborough, Elizabeth Cordon, landlady of the House Inn, East Ferry, was charged with selling adulterated gin on May 5.—Mr. Tweed defended.—Supt. Edgley stated that he visited defendant's house and asked for a pint of gin. She took the bottle, and was some time in the dram shop. He called out to her, and she said she was mixing some as she had none mixed. He offered to take a pint of whiskey, but she said that she had no whiskey mixed. He noticed a keg marked "Gin," and he asked to see if there was any in. She said there was none in, but she drew a pint out, and he paid her 1s. 8d. for it. He had received the certificate showing that the gin was diluted to the extent of four degrees too much.—Mr. Tweed pleaded that defendant had used the wrong test, and that the spirit had evaporated.

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—Fined 15s. and 4s. 6d. costs. —James Hemingway, Bridge-street, Gainsborough, was similarly charged, and Mr. Tweed again defended.—Supt. Edgley stated that on Saturday, May 18, about 11.30 a.m., he visited defendant's house and asked for a pint of whiskey. Mrs. Hemingway told her son to fetch it, and he (witness) asked her why she was sending out for it, as he wanted the whiskey which was exposed for sale in the dram shop. The boy then went to the keg to draw a pint, but he stopped him and looked in his jug, and found about half a pint of whiskey in. He said to the defendant's wife, "I have not come to trick you, and I don't want you to trick me." He took a pint out of the keg, and paid 2s. 4d. for it. Mrs. Hemingway said as he was going out that she knew it was wrong, because she had only mixed it that morning. The certificate showed that the whiskey was 47.5 degrees below proof, which was 22.5 degrees under the limit.—By Mr. Tweed: The boy did not say that the whiskey was not for sale, but Mrs. Hemingway said that the whiskey was all right for twopennyworths, but was not right for him (witness).—Mr. Tweed pleaded that the Superintendent was not prejudiced by the sale of the whiskey, as the defendant's son told the Superintendent that the whiskey was not for sale before he bought it.—Supt. Edgley said that he could call P.S. Brackenbury, but he was away on drill duty. The defendant had asked him not to be too hard on him, as he was leaving the house, he had no idea the case was to be defended.—The case was adjourned for a week in order that P.S. Brackenbury could give evidence.

At Sevenoaks Police-court, Charles Sayers, landlord of the Woodman Inn, Otford, was summoned for selling a half pint of gin, which was adulterated, on May 4.—Supt. Holman deposed that he sent the sample to the public analyst, who certified that it was 1.83 per cent. under proof.—The Magistrates fined defendant 10s. and the costs 10s. or seven days.

FREDERICK WM. KEYWOOD, landlord of the Bull Inn, Otford, was summoned for selling adulterated brandy and whiskey.—Mr. Barton appeared for the defendant.—In this case it was shown that the samples purchased were considerably under proof, and the Bench, who characterised the case as a bad one, fined defendant £5 and the costs 10s. in respect to the adulterated brandy, and 20s. and the costs, 11s., for the adulteration of the whiskey.

At Worksope Petty-sessions, Mr. G. E. Garforth charged Thomas Colver of the Victoria Hotel, with selling adulterated whiskey.—On April 29, he visited the hotel, and bought 8d. worth of whiskey, and was served by Mrs. Colver. After he was served he told Mrs. Colver who he was, and also that the liquor would be submitted to the public analyst. He had sent a sample to be analysed, with the result that the spirit was found to contain 96.9 parts of whiskey and 3.1 parts of water, thus there was a deficiency of 3.1 parts.—Mrs. Colver, wife of defendant appeared, and stated that she had drawn the whiskey which had been analysed, from a receptacle in which she had some time ago put four gallons, and, owing to the fact that there was a great amount of heat arising from gas jets and fires in the kitchen behind, some portion of the spirit had evaporated. It had been a mistake to have had so much thus exposed.—Mr. Garforth said he had noticed the whiskey with which he had been served was at the bottom of the vessel used, and of course some of the spirit might have evaporated.—The defendant was fined £2, to include costs.

At Bearsted Petty Sessions, Thomas Mills was summoned for selling half-a-pint of whiskey which was not of the nature, quality, and substance demanded, on the 8th ult.—P.S. Foreman deposed to buying the whiskey at defendant's house, the Horse Shoes, East Farleigh.—Supt. Johnstone handed in the analyst's certificate showing that the whiskey was 32.95 under

proof, 9.7 under the legal limit.—Defendant said he broke the spirit down according to a licensed victuallers' guide he had.—The Bench ordered defendant to pay £2 fine and costs, or one calendar month's hard labour.—Ernest William Wade pleaded guilty to selling adulterated whiskey, at Thurnham, on the 10th ult.—The analyst's certificate showed this to be 40.60 below proof; containing 15.60 parts of added water.—P.S. Foreman deposed to purchasing three-eighths of a pint of gin at defendant's house, the Black Horse, Thurnham, on the 10th ult.—The certificate showed this gin to be 47.36 below proof, and contained 12.36 parts of added water.—John Cakebread, called by defendant, said that there was a notice in the bar which announced that all spirits were adulterated according to price.—Defendant then withdrew his plea of guilty in the first case, and called John Adams, who deposed that on the 9th inst. he saw defendant's little boy, aged four, pouring water in a bottle.—Defendant said that he put the bottle on one side, but it was used in his absence.—The Bench convicted in both cases, and inflicted a fine of £2 and 11s. costs or one month for the whiskey adulteration, and a like penalty for the gin.—Thomas Durban was summoned for selling half-a-pint of gin, which was adulterated to the prejudice of the purchaser, on the 8th ult.—P.S. Foreman deposed to buying the liquor at the Star Inn, Loose, on the 8th ult. Defendant, on being told that it was for analysis, said he was not sure of it as his wife broke it down. On analysis this liquor was proved to be 36.97 under proof, viz., 1.97 below the legal limit.—Defendant was mulcted in 10s. and 10s. costs, or seven days, the Chairman remarking that the case was not nearly so bad as the others.

MRS. MARY NORWOOD BRICE, of the Hand and Spear Hotel, Weybridge, was summoned for selling a quantity of Irish whisky, which had been adulterated, on May 21st.—Mr. Frederick Cliffe, a county inspector under the Food and Drugs Act, said he entered the house on the day in question, and asked for 2d. worth of Irish whiskey. He was served, and then asked for half-a-pint of the same whiskey, which he paid 1s. 4d. for. He then told the barmaid that he intended having it analysed by the public analyst, and divided it into three parts, leaving one with the barmaid. The certificate of the public analyst stated that there was 5 per cent. of water in the whiskey over and above that which was contained in whiskey under 25 degrees under proof.—Mr. Edwards who defended, said he must plead guilty. The whiskey in question was taken from a cask of 54 gallons which Mrs. Brice had in on November 22 last. The whiskey had got very low, and, on the last quantity being taken out by the barmaid, she added a certain quantity of water unknown to Mrs. Brice.—Fined £5, including costs.—Charles Pontin, licensed victualler, of the Rose and Crown, Thorpe, was summoned for selling adulterated Scotch whiskey, on May 21.—Before giving evidence in this case, Mr. Cliffe said there was a notice exhibited in a conspicuous part of the bar stating that "All spirits sold at this establishment are diluted according to price." It had been held that a notice stating that no alcoholic strength was guaranteed was sufficient to avoid any penalty, but he submitted that in this case he paid the usual price for whiskey, and did not get the usual strength.—Mr. Cliffe, in his evidence, said he had a glass of whiskey at defendant's house, and also purchased half-a-pint, for which he paid 1s. 4d. The woman who served him wrote a label and placed on the bottle, stating that the whiskey was "Diluted according to price." He believed 2s. 8d. was almost the universal price paid for ordinary whiskey. The public analyst certified that instead of being 25 per cent. it was 27 per cent. under proof.—Mr. Talbot Kyle, County Inspector at Dorking, said the usual price paid for half-a-pint of whiskey was 1s. 4d.—For the defence, Mr. Crowdy argued that the price had nothing to do with the question, because it was absurd

to suppose that Mr. Cliffe did not know what the label meant. Any man would expect to find that spirits labelled in that manner were below the usual strength. The Chairman: We must convict, but the deficiency is not great, and the fine will be £2 and 12s. 6d. costs.—Mr. Crowdy said he should consider the desirability of lodging an appeal.

MILK.

AT Edgware, Albert Mayhead, confectioner, of Peterborough-road, Harrow, appeared to a summons for selling milk deprived of 16 per cent. of its natural fat.—Mr. R. Watts, inspector under the Food and Drugs Act for the County of Middlesex, stated that on May 12 he bought a pint of milk of defendant, paying 2d. He told Mrs. Mayhead that it would be analysed, and the result of the analysis showed that the sample had been deprived of 16 per cent. of its natural fat. The milk was served from a vessel in the shop, and the maid used a dipper.—Defendant said he dealt with two milkmen. He sold only a small quantity over the counter, and the bulk was used in the confectionery business. His conscience was quite clear that they never added to nor extracted cream from the milk.—The Chairman said there was no alternative but a fine, although they were satisfied that defendant did not tamper with the milk.—Fined 10s. and costs.

JOHN WRIGHT, of High-street, Harrow, was similarly summoned.—Mr. R. Watts gave evidence to the effect that he called for a pint of milk at defendant's shop. Defendant did not sell pints, so witness called for three glasses. There were only two glasses left, and for these defendant charged threepence, or at the rate of sixpence a pint. The milk, on analysis, was found to have been deprived of 16 per cent. of its natural fat. The officer added that defendant did a large milk trade with the Harrow School boys. Good new milk could be purchased at 1½d. per pint.—Defendant said the milk was sold as purchased, and they had no apparatus for extracting the cream.—Fined 10s. and costs.

AT Nottingham, on June 9, John Harby, of Kegworth, was charged with offering for sale, on March 10 last, a quantity of milk, the same having 14 per cent. of the fat abstracted.—Mr. Tinsley Lindley (instructed by Mr. H. W. Day) prosecuted, and Mr. H. B. Clayton defended, the latter pleading not guilty.—Mr. Lindley, in opening the case, said the Bench had three cases before them under the Food and Drugs Acts of 1875 and 1879. In this case it appeared that samples of the milk, which had been consigned to Thomas Barker, of Nottingham, were taken at the Midland Station. The usual course was adopted, one being sealed and the other being taken to the analyst.—Richard Edward Byrns (Inspector of Nuisances for the Borough of Nottingham) stated that on March 10 last, about a quarter to seven in the morning, he was at the Midland Railway Station, and there saw on the platform a number of milk churns consigned to Thomas Barker, of 46, Corporation-road, the defendant's name and address being on the lid. Witness took about a pint of milk from one of the churns and divided it into two parts, taking one to the Guildhall and keeping one for himself. The samples were sealed, and at the time the receiver and one of the railway company's officials were present. The analyst, in his report, stated that there was a deficiency in fat to the extent of 14 per cent.—Cross-examined by Mr. Clayton, witness stated that he had no instructions as to how much he should take for a sample.—Thomas Barker, of 46, Corporation-road, stated that he carried on a business as a milk-seller, and said that he was present when the samples were taken by last witness. He also stated that a contract existed between Harby and himself for a supply of pure milk.—For the defence Mr. Clayton said that

before he went into the merits of the case he had four or five technical objections to raise before the prosecution proceeded further.—He submitted that the Act had not been complied with, and stated that it was the duty of the analyst to divide the sample into two parts. He also submitted that there was no evidence before the Bench to prove, and the prosecution had not proved, that the Midland Railway Station at Nottingham was the place of delivery.—The Chairman (Mr. Acton) stated that under section 15 of the 1875 Act it was clearly pointed out that the sample delivered to the analyst must be divided by him.—Thomas Barker, having been recalled, stated that the churns were consigned to him, and were always delivered at the Midland Railway Station at Nottingham.—Mr. Clayton stated that, with regard to the merits of the case, the defendant was a farmer at Kegworth, and had sold milk for a large number of years, and, as far as he (the defendant) knew, there had been no complaints. He would call witnesses who would absolutely trace the milk on that particular morning from the time it was milked to the time it was put on the railway at Kegworth Station. With regard to Inspector Byrns, he (Mr. Clayton) thought that he ought not to have taken less than a pint and a-half or two pints for a sample. A point they (the Bench) must consider was that at the time the sample was taken the weather was very cold, and consequently the milk at that particular time was naturally poor. They would prove that the defendant had not abstracted any fat, as he had no instrument with which to do it.—James Renals, of Castle Donington, said he had been employed by the defendant as foreman cowman for about four years, and it was his business to superintend the milking and see the milk sent off. He had never seen anything abstracted from the milk.—Bernard Wade and Edmund Hallam, both employes of the defendant, gave similar evidence.—At this point Dr. Boobyer stated that the proper amount that should be taken for a sample was a pint, that amount to be divided into three parts.—The defendant said he had sold milk for upwards of twenty years, and during that time had never had any complaint.—The Chairman: We have to convict you in this case, and you will have to pay a fine of 20s. and costs.—John George Fletcher, of Hazlewood, Derbyshire, was summoned for offering for sale on March 10 milk containing 12 per cent. of water, 6 per cent. of the fat being extracted.—Mr. Tinsley Lindley, prosecuted, and Mr. Bostock defended.—Inspector Byrns said that on the morning of the day in question he visited the Midland Railway station, and there saw on the platform a number of milk churns consigned to the Callow Park Dairy Company. Witness had the milk poured out into a bucket two or three times, and he then took about a pint of it and divided it into two parts. The analyst's report stated that the milk contained water to the extent of 89·89, total solids 10·11, fat 2·57, solids in fat 7·54, and the analyst's belief was that that sample contained added water to the extent of 12 per cent., the deficiency of fat being 6 per cent. The inspector stated that the bottle which contained the sample had burst, and on account of that the case was withdrawn.

AT Liverpool, on June 9, for selling milk as new which had been deprived of part of its cream, Fawcett Harper, 102, Smithdown-road, was fined £3 and costs; Ann Bell, 33, Smithdown-road, £3 and costs; Robert Handley, Vine-street, £3 and costs; and Patrick Garvey, 23, Pine-grove, £2 and costs.—For selling milk which had been deprived of part of its cream and slightly watered, Jacob Abraham, 12, Credworth-street, was fined on two informations 20s. and costs and £2 and costs.

AT Bootle, Jacob Bennett, Kendrick-street, Seaforth, was summoned for selling diluted milk on May 20. The Chief Constable handed to the Bench the analyst's

certificate, which stated that eight parts of water had been added to every hundred parts of milk, and was deficient to the extent of one-sixth of cream. Inspector Fergusson proved the case. Defendant pleaded that the milk was the same as when he bought it from another person. The Chief Constable said the defendant could have protected himself by getting a warranty from the vendor. The Bench imposed a fine of 5s. and costs, and allowed the analyst's fee.

At Hull, on June 10, John George Riley was summoned for selling milk adulterated with 5 per cent. of added water on May 6.—Mr. Duncan (Town Clerk's department) prosecuted.—The defence set up was that the milk was sold just as delivered to the defendant from a farmer at Salt End, with whom he had a verbal contract.—His Worship pointed out that the defendant had his protection in insisting on a written guarantee, and ordered a penalty of 7s. 6d. and costs.

ELIZABETH COLE, West Dock-avenue, answered a summons for selling milk adulterated with 8.47 per cent of added water, on May 6.—The defendant said she had added no water. She bought the milk from Mr. Crawford, in Chalk-lane, and it was sold just as delivered to her.—His Worship pointed out that the full penalty was £20, and fined the defendant 10s. and costs.

WILLIAM GREEN, Bean-street, appeared in answer to a summons, also issued by the Corporation, for selling milk adulterated with 22.47 per cent. of added water.—A boy, named Edward Rokahr, who was in the defendant's employ, admitted putting water into the milk without the defendant's knowledge.—His Worship said that it was a serious amount of adulteration, but having regard to the general facts he should impose a nominal penalty of 10s. and costs. He would impress upon the defendant, however, the necessity of selling his milk to the public through someone upon whom he could absolutely rely.

At Southampton, on June 11, William Hayward, of Pondsides Farm, Millbrook, was summoned for selling milk from which a large quantity of the fat had been removed.—The Town Clerk (Mr. G. B. Nalder) prosecuted, and it appeared that the analyst's certificate showed that 31 parts of the fat out of the 100 had been abstracted.—Mr. Bell was for the defendant, and it was stated that the milk was purchased in Waterloo-road, Freemantle, from the defendant's brother. The price charged for a pint of milk was 1½d.—Stephen Hayward, the brother, who lives at the Post Office at Millbrook, was called, and admitted selling the milk for the defendant, but said he did not hear the inspector ask for new milk, though Mr. Hennen declared that he did so.—Mr. Bell said the milk was bought from Mr. Davey, and sold exactly as it was received, added to which the defendant's brother, who had been called for the prosecution, did not hear the inspector ask for new milk. He (Mr. Bell) submitted that his client was not morally responsible for the condition of the milk, and that, therefore, if a conviction should follow, a nominal penalty should suffice.—Mr. Perkins said the public must be protected, and the defendant was fined 10s. and costs.

At Leicester on June 12, Wm. Thos. Wright, milk seller, Bedford-street, was summoned for selling adulterated milk on May 16.—Mr. J. Bell (the Town Clerk) prosecuted.—The evidence showed that the milk was purchased in the usual way, and the analyst's certificate showed that the milk consisted of 8.51 per cent. of solids, not fat, 2.57 of fat, and 88 of water. He was of opinion that at least 6 per cent. of the natural fat had been abstracted from the milk.—Defendant denied that he adulterated the milk, and said he sold it in exactly the same state as he bought it.—Fined 40s. or a month.

MILK PROSECUTIONS AT PORTSMOUTH.

At Portsmouth several milk prosecutions were heard. Miss Agnes Weston, proprietress of the Royal Sailors' Rest Coffee Palace, Commercial-road, Landport, was summoned for selling milk which had 38 per cent. of cream abstracted.—Mr. G. H. King, jun., prosecuted, and Mr. E. J. T. Webb appeared for Miss Weston.—On April 30, Mr. Gray, Inspector under the Food and Drugs Act, purchased a glass of milk at the Sailors' Rest. Having received it, he explained that he wanted the milk for analysis. As usual, the milk was divided into three parts, one being left with the man who sold it.—Cross-examined, the Inspector said that it was about eight o'clock in the morning when the milk was purchased. The person who served him said it was yesterday's milk.—Re-examined: There was a board outside stating that new milk could be purchased for a penny a glass.

William Adams, who served the Inspector, stated that he told him that it was "yesterday's milk" before being informed of the purpose for which it was wanted. Cross-examined, the witness explained that the milk for sale in the bar was kept in a large can, and often sold without being stirred, the result being that some people got all the cream, while others had very little.

Mr. Webb urged that Miss Weston took every precaution to ensure milk of good quality being sold to customers.

Mr. Dumbril, who sold the milk, said he supplied 18 gallons at a time. When it left his possession it was of good quality, but the custom was for the servants at the Rest to draw two or three gallons from the top without stirring it up, the result being that the milk left at the bottom was not much better than skim milk.

An employé at the Rest said the milk was carefully tested, and orders were given that none was to be sold without it was stirred.

The Bench convicted, but said they were quite convinced that Miss Weston, who was doing good work in the town, had no personal knowledge of the transaction. She was, however, responsible, and a penalty of 30s., including costs, was inflicted.

CHARLES LEE, Milk-seller, of 54, Charlotte-street, Landport, was summoned for selling milk with 45 per cent. of the cream abstracted.—Mr. G. H. King, jun., prosecuted.—Mr. Ivens defended, and urged that the milk was sold in the same condition as received.—The defendant was ordered to pay £1 fine and 15s. costs.

ARTHUR WILLIAM LOADER, 278, Commercial-road, Landport, refreshment house keeper, for selling a glass of milk to Inspector Gray, with 81 per cent. of cream abstracted, was fined £1 and 7s. 6d. costs.—The defendant put in a similar plea.

SOMERSET HOUSE AGAIN.

At North London, Daniel Evans, of 108, Shrubland-road, Dalston, appeared to an adjourned summons, which had been issued at the instance of the Hackney Vestry, for selling milk to which the public analyst said 7 per cent. of water had been added. The case had been adjourned to enable Mr. C. V. Young, who appeared for the defence, to have the third portion of the sample submitted to the analyst of Somerset House. This last certificate showed no satisfactory indications of added water; and Mr. D'Eyncourt therefore dismissed the summons. Mr. Young asked for costs—merely out-of-pocket expenses—viz., £2 10s. 6d. Mr. Tiddeman objected to costs on such a doubtful case; the authorities at Somerset House seldom agreed with public analysts outside. Mr. D'Eyncourt said the defendant was entitled to his costs if the case was decided in his favour. Summons dismissed with £2 10s. 6d. costs.

BEER.

AT North London, Thomas F. Tant, a beerhouse-keeper, of Cottenham-road, Holloway, was summoned for diluting beer. The summons was taken out by the officers of Inland Revenue. Mr. Oswald Wheeler, brewer to the North London Brewery, was called to prove the quality of the ale when delivered to the defendant, and Mr. Robbins, from the analytical laboratory at Somerset House, proved that, allowing for finings, there was an addition of $2\frac{1}{2}$ gallons of water to the barrel of mild ale, and one gallon of water to the barrel of porter. The defence was that if there was dilution it was accidental and not design. In reply to the Magistrate, the defendant said he only did about £70 per month, and the total consumption of ale and porter in a week, about seven barrels. Mr. Dennis, who prosecuted, said there was a good profit got in beer irrespective of dilution. Mr. Bros inflicted a fine of £15 and 2s. costs.

AT Lambeth, on June 14, Edmund Ferguson, landlord of the Horns Tavern, Kennington Park-road, was summoned by the Excise for diluting beer.—Mr. Dennis appeared to support the summons, and the defendant was represented by Mr. J. P. Grain.—On March 29, Mr. G. C. Farman, a supervisor of Inland Revenue, visited the defendant's premises and took two samples, one of ale and one of stout. In regard to the ale the Excise made no complaint, but with regard to the stout it was alleged that upon analysis at Somerset House it was found to be diluted, the dilution, in the opinion of the analyst, being equal to the addition of $1\frac{7}{10}$ gallons of water to the barrel of 36 gallons.—For the defence it was said that the defendant's manager, finding the stout was running low, put some of the waste from the bar into the barrel.—The Manager was called, and said the defendant had no knowledge of what he did.—Mr. Grain, in addressing the Court for the defence, said he could not deny that, as the law stood, the defendant was liable for the act of his servant. The case, however, was a hard one, and he submitted that it would be met by a small penalty.—Mr. Hopkins said he did not suppose anyone would accuse the proprietor of the Horns of diluting beer in the bad sense of the term, but they had heard a confession of bad cellar management on the part of the manager, which had brought very serious consequences upon his employer. The defendant would have to pay a penalty of £25 and £2 6s. costs.

AT Highgate Petty Sessions, Henry Thomas Haynes, of the Angel, High-street, Highbury, was summoned by the Excise authorities for diluting beer. It was stated that a sample of defendant's beer was taken on March 20, and upon being analysed was found to be diluted to the extent of three gallons of water to the barrel of 36 gallons. Defendant pleaded guilty, and in mitigation suggested that he was the victim of a dishonest barman. The Bench inflicted a fine of £10, and costs £4 4s.

HOW FOOD IS USED IN THE BODY.

EXPERIMENTS WITH MEN IN A RESPIRATION APPARATUS.

By PROF. W. O. ATWATER.

How does the body make use of its food? What ingredients make muscle and fat and blood and bone and brain? Which yield heat and force? What proportions of different food-materials are needed by different classes for the building and repair of tissue, and for the yielding of energy for warmth and work? Such are some of the questions which modern

science is asking, and for which physiological chemists are seeking answers by actual experiments with animals and with man. The larger part of the enquiry is carried on in Europe, but of late it has been undertaken actively in the United States. For some time past research has been going on in the chemical laboratory of Wesleyan University, in co-operation with the Storrs (Connecticut) Experiment Station, and under the auspices of the United States Department of Agriculture. A preliminary report of several experiments upon the transformation of material in the body has just been published. The purpose of the present article is to give a brief summary of the results. This I am very glad of the opportunity to do, and more so for the sake of correcting numerous unauthorised and incorrect statements which have appeared in public prints.

One fundamental question proposed in these experiments is this: How much of each of the different nutritive ingredients of food does a man actually consume in his body under different conditions of rest and work? Or, to put it in another way, Will a given diet, containing certain amounts of nutrients, supply more or less of each than he needs? This means that the experiments are intended to show just how much of each of the nutritive ingredients the body requires, and how much of its own substance it will gain or lose when supplied with a given diet.

At first, though it might seem very easy for a man to find whether he gains or loses body material on a given diet, and with any particular kind of work, by simply weighing himself on accurate scales. But the gain or loss of weight does not show what kinds of material the body has gained or lost. For instance, a man may grow heavy with a certain diet, but the scales do not show whether this increase in weight is muscle or fat or water. He may reduce his weight by reducing his food, or by increasing his muscular exercise, or by the use of drugs; but the scales do not show how much of this loss is fat, which perhaps he would be glad to be rid of, or how much is muscular or other tissue, which he cannot afford to lose. The only way to get at the facts is by accurate measurement of the income and outgo of the body.

When we speak of food and drink we think of such things as meat, bread, potatoes, milk, and the like. But for the present purpose we must consider the ingredients of the food. These are, first, the chemical elements, nitrogen, carbon, hydrogen, oxygen, sulphur, phosphorus, etc.; and, second, the compounds of these elements, such as water, protein, fats, carbohydrates, and mineral matters.

The income of the body consists of food, drink, and the oxygen of inhaled air. The outgo includes the carbonic acid and water given off by the lungs and skin, and the water and other ingredients of the products eliminated by the kidneys and intestine. In the experiments here described we find the weights of these substances and the proportions of their chemical compounds and elements; and from these we find the weights of elements and compounds of the income and of the outgo. Comparing one with the other, we have the figures for striking the balance of income and outgo of matter. In the experiments for this purpose, not only the food and the solid and liquid excreta, but also the inhaled and exhaled air, have to be measured, weighed, and analysed. In other words, the products of respiration have to be taken into account. Accordingly, the apparatus for collecting and measuring the air is called a respiration apparatus, and the experiments are called respiration experiments. The respiration apparatus here described is the same in principle as that devised by the German experimenter Pettenkofer, and described in *The Century Magazine* for June, 1887, though the details and the methods of experimenting are different.

(To be concluded.)

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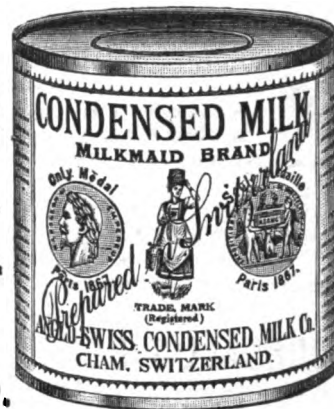
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Food and Sanitation.

SATURDAY, JUNE 26TH, 1897.

AUSTRALIAN FROZEN BEEF COMPARED WITH AMERICAN CHILLED AND PRIME ENGLISH BEEFS.

DR. S. RIDEAL has recently made an exhaustive examination of three samples of Queensland beef which he took personally from the Refrigerating Stores, and subjected to a full analysis, comparing them with similar portions of prime American chilled ox beef and prime country-killed English ox beef, with the following results, viz.:—

In the microscopical examination the samples, when thawed, showed that the meat fibres had not been ruptured nor altered in any way by the hard freezing process adopted by Queensland shippers, and that the changes in the meat juice and in the fat were very slight.

Dr. Rideal also determined the relative digestibilities of the lean portions of the samples of Beef. For this purpose he selected the Meat freed from fat, as far as possible, and then washed it free from juice and blood and so obtained the pure moist fibre. The following figures summarise the results obtained, viz.:—

| | Water % | Fat % | Fibrin % | % of Moist Fibrin digested. | % of Fat and Water Free Fibrin digested. |
|-------------------|---------|-------|----------|-----------------------------|--|
| Queensland Cow... | 78.94 | 3.40 | 17.66 | 12.9 | 73.05 |
| " Heifer... | 81.24 | 2.36 | 16.40 | 12.2 | 74.39 |
| " Ox ... | 82.61 | 2.02 | 15.37 | 11.8 | 76.77 |
| American Ox ... | 79.62 | 2.97 | 17.41 | 12.3 | 70.55 |
| English Ox ... | 83.76 | 1.54 | 14.70 | 11.6 | 78.91 |

In the last column of the above table the relative digestibility of the lean portions of the several animals, calculated on the dry fibrin free from fat and moisture, is shown, and it will be noticed that the American ox gave the worst result. The total differences observed were, however, so slight that Dr. Rideal is of opinion that they do not warrant him in concluding that the methods of preservation have modified the digestibility of the meat in any way, the variations in this case, as in the microscopical examination, being due to differences in the animals themselves rather than to any effect produced upon the meat by the preserving processes.

Dr. Rideal also carried out a complete series of tests of the value of the different samples for preparation of beef-tea and soup, and found that in the ordinary method of making beef-tea (viz.:—using one pound of meat to one pint of water, and stewing the mixture for six hours), the teas obtained resemble one another so closely that it is almost impossible to distinguish the one from the other. Beef-tea made by the process mentioned, contains very little albumen, but Dr. Rideal finds that the total nitrogen present in such teas is practically the same in all, and that the small amount of albumen contained in such teas is higher in the Queensland ox than in any of the other samples. The total soluble proteids (which measure the nourishing value of such teas), is higher in the Queensland ox than in the other samples. The extractives, or stimulants, are very similar in amount; and, in fact, the beef-teas made from these various sources did not differ in their nourishing value nor in their stimulating effect to any appreciable extent, and the results of the experiments in this direction confirm those obtained by the previous microscopical and digestive examinations.

In his report, Dr. Rideal states that the beef from the three different sources examined are practically of equal nutritive value, and he adds that undoubtedly the variations in the chemical and physiological properties of the meats are not sufficient to account for the difference in the market values of the various samples. His opinion seems to be summarised in the concluding sentence of his interesting report:—"I can confidently assert that both with regard to digestibility, and for the preparation of soups or beef-tea, the hard frozen meat is of intrinsically the same value as that which has been chilled or freshly killed."

GROWTH IN CHEDDAR CHEESE.

THE following is from an article by Mr. H. L. Russell, bacteriologist at the Agricultural Experiment Station of the University of Wisconsin, U.S.A.:—The general results of an analytical study of the bacterial changes

that take place in the curing of Cheddar cheese are briefly summarised as follows:—(1.) There is at first a marked falling-off in the number of bacteria in green curds for a day or so (period of initial decline). (2.) This is followed by a very rapid increase in numbers, in which the bacteria reach scores of millions of organisms per gram (period of increase). (3.) This period is followed by a diminution in numbers, at first rapid, but later more gradual, until the germ content sinks to insignificant proportions (period of final decline). (4.) The time necessary to reach the maximum development (second period) is hastened or retarded by such external conditions as temperature, etc. (5.) The second period also marks the beginning of the physical change that occurs in the cheese in the earlier part of the breaking-down of the casein. (6.) The bacterial flora of cheese differs markedly from that of milk. In milk the lactic acid bacteria predominate, but accompanying them are always liquefying or peptonising organisms, and, as a rule, bacteria capable of developing gaseous by-products. In the ripening cheese the peptonising or casein-digesting bacteria are quickly eliminated; the gas-producing bacteria disappear more slowly, sometimes persisting in very small numbers for a long time. The lactic acid bacteria, on the other hand, develop enormously for a time until the cheese is partially ripened, when they, too, begin to diminish in numbers. (7.) The generally accepted theory, that the peptonising or digesting bacteria are able to break down the casein in the cheese as they do in milk, is improbable, because this type of bacteria fails to increase in the cheese, and usually disappears before there is any evidence of physical changes in the conditions of the casein. The same is true where cheese is made from pasteurised milk to which copious "starters" of these peptonising organisms have been added. (8.) The coincidence existing in point of time between the gradual ripening of the cheese and the marked development of the lactic acid bacteria seems to indicate that these phenomena are casually related. This view is further strengthened by the fact that cheese made from pasteurised milk in which the lactic bacteria have been destroyed fails to ripen in the normal manner while the addition of a pure lactic acid ferment to the pasteurised milk permits the usual changes to occur in a perfectly normal way.

FLIES AND LEMONS.

BOARDS of Health in this country have a great opportunity. The only thing necessary is that they shall cast their insular pride behind them. To obtain the heights of efficiency and zeal reached by the Board of Health in Iowa, our institutions must be humble enough to copy, and to strive after a great and noble example. Iowa knows something about health. Iowa has penetrated to the secret heart of the thing. But Iowa has no pride. She dispenses her knowledge for the benefit of the nations. What can be more generous than the lavish way in which her Board of Health dispenses hints and wrinkles to us? "Spring is here," says the Board, with most amazing perspicuity, "and soon the flies will be on hand, and will demand house-room and feed." But the Iowa Board is not a Society for the Protection of Flies. Far from it. It demands the death of the fly, the extermination, bloody and ruthless, of that insect. "Their legs"—flies' legs, not the legs of the Iowa Board of Health—"are covered with morbid matter," and "they crawl over the bread, and sugar, and fruit, and cake, and pie," depositing most deleterious bacilli on the route. Therefore, "decency and a due regard for health suggest that money spent for screens for doors and windows, and for sticky fly-paper, is money well spent." The Board further suggests that humanity ought to go in for an orgie of lemons—not lemons with soda or whiskey, but the pure

sour fruit alone. "Scarcely anything is better for the complexion," says the Board, and the women of the place seem to have made quite a rush on the market. Oh, that we in forlorn England had such a wise Board of Health to advise us!

MORE EXPERTS ON MILK.

At the Merthyr Police-court, on June 14, before Mr. W. M. North (stipendiary), Mr. C. H. James and Mr. Matthew Truran, an adjourned summons against Paul Carter for selling milk having a low percentage therein of butter-fat, to the prejudice of the purchaser, was again considered. Mr. Sydney Simons, who appeared for the defence, cross-examined the analyst, Mr. Saylor. Witness said that when a cow was poorly fed or diseased the percentage of fat might be as low as 2.2. He regarded 2.75 as the minimum standard. For the defence Mr. Rees Charles, public analyst for Breconshire, Carmarthen, Neath, etc., stated that good milk had sometimes less fatty matter in it than 2.5 per cent. Until very recently the standard had not in the case of milk been fixed by Parliament, and the Society of Analysts had really been trying to take the place of Parliament in fixing a standard, which they had no right to do. Dr. C. E. Simons, Merthyr, stated that he had found samples of milk taken direct from the cow at 2.3 per cent. of butter-fat. The Stipendiary intimated that the magistrates could not convict, and the case was dismissed.

A SCOTCH APPEAL CASE.

In the Justiciary Appeal Court, on June 8, counsel were heard in an appeal by William Burns, grocer, 42, Dunnikier-road, Kirkcaldy, against a conviction in the Burgh Police-court at Kirkcaldy, on a charge of having contravened the Food and Drugs Act by selling one pound of margarine to an inspector of nuisances when butter was asked for. The inspector, when he asked for butter, was asked what price he wanted it at, the prices being 8d., 10d., 1s. and 1s. 2d., and he replied that he would take it at 10d. An apprentice proceeded to weigh out from a kit which had had a ticket with the word "margarine" on it, but the ticket had fallen down. Before the transaction was completed, another assistant took the packet and wrapped it up in a paper labelled "margarine," and handed it over to the inspector. The inspector then said it was intended for analysis, and the second assistant said, "You have just got margarine; you could not expect to get butter for 10d."

It was contended by Mr. A. S. D. Thomson, for the appellant, that the conviction was bad, in respect that the summons did not contain the name of the prosecutor, but merely said it was at the instance of the burgh prosecutor, whereas, in the Food and Drugs Act, it was required that the name should be given. It was also maintained that, in point of fact, no offence was committed, the assistant who handed over the packet never having been asked for butter, and the packet, when handed over, having been labelled "margarine" on three sides.

Mr. Young, for the prosecutor, contended that the prosecution was under the Burgh Police Act, 1892, which did not require the name of the prosecutor to be given; and he also said that the inspector did not observe that the packet was labelled "margarine."

The Lord Justice Clerk said he held the prosecution to have been under the Food and Drugs Act only, because the sections of the Burgh Police Act which were referred to dealt only with penalty, and not with offence. That was a fatal objection to the complaint, and, though he gave no decision on the point, he doubted whether it would not be necessary, under the

Burgh Police Act, to give the name of the prosecutor in the summons. But there was another objection, which he hoped officials in the lower courts would pay attention to. The Magistrate said that certain documents were produced, but they had no record of them. Everything which was produced at a summary trial should be noted. It was but simple justice that they should be so, because, without that, if the case went further, there was nothing for the court of review to look at.

The other judges concurred, and the conviction was set aside, with expenses, an order being also given for the repayment of the fine.

POISONED BY TINNED MEAT.

MRS. ELIZABETH MORGAN, 28 years of age, the wife of Mr. Thomas Morgan, night fireman at the Nantgwyn pit of the Naval Collieries, Penygraig, living at Tony-pandy, has met with a painful death. She partook of tinned corned beef for supper, became unwell and died. Dr. Llewelyn, who attended her, had no doubt that death was due to ptomaine poisoning caused by deceased having eaten the tinned beef, which could not have been fresh at the time, and the coroner at the inquest on the body, spoke of the danger of opening canned meats and then allowing them to remain in the tins afterwards. The jury, on June 8, returned a verdict in accordance with the medical evidence, to the effect that "Death was due to ptomaine poisoning."

OLIVE OIL: A CURIOUS CASE.

SAMUEL GARRIST, an oilman, 158, Trfnity-road, Tooting, was summoned by the Wandsworth District Board of Works, last week, for selling olive oil adulterated with 100 per cent. of mineral lubricating oil. Mr. W. W. Young supported the summons. At the instance of Mr. Samuel Smith, the inspector under the Food and Drugs Act, a woman named Last purchased some olive oil at the defendant's shop. It was analysed with the result mentioned. The woman Last admitted that the defendant told her that the oil was not fit for personal consumption. The defendant said he offered the woman a bottle of Lazenby's oil, which was used for salad. She refused to accept this, and wanted loose oil. He served her and explained to her that it was only used for greasing and cleaning purposes. Mr. Lane, Q.C. (with some warmth): The case won't do. I am persuaded that neither the woman nor the inspector thought they were getting olive oil. Mr. Young: Supposing a child purchased it. Mr. Lane, Q.C.: The summons is dismissed. Mr. Young: The committee considered the matter, and directed these proceedings to be taken.

A CRUSADE AGAINST ADULTERATION IN SHEFFIELD.

MR. H. SAYER, deputy Town Clerk, Sheffield, informed the magistrates, on June 11, that of late the practice of adulterating milk had largely decreased, owing to the prompt action of the Corporation. Mr. Sayer appeared yesterday, in the Second Court, to prosecute in five cases in which milkmen were charged with this offence, the magistrates on the bench being Mr. Jeremiah Robertshaw and Mr. T. H. Waterhouse.

SOME MISTAKE.

The first defendant was John Thorpe, milk seller, of Whitley, Grenoside, who was summoned for selling one pint of old milk, containing 92 parts of skimmed milk and eight parts of added water, not in the nature and quality of the substance required, on May 14. Mr. Arthur Neal defended.

Mr. Sayer explained that the defendant was sum-

moned because he was in actual possession of the milk, and it was always thought best that the actual seller should be summoned. The charge was one of adding water, which was what no amount of skimming would do.

The Inspector (Mr. Duro) said that he stopped the defendant in Montford-street as he was carrying the milk from house to house, and purchased a pint from him, paying him $\frac{1}{4}$ d. for it, and dividing the sample for analysis as usual.

Mr. Neal's defence was that some mistake had been committed. The defendant's employer, Mr. Bridges, farmer and milk dealer, Grenoside, had sent milk into Sheffield for more than 25 years without a single complaint ever being made as to its quality. The analyst's certificate appeared to be based on what was an opinion only—namely, that water had been added. He argued that it was beside the question to suggest that a respectable milk dealer who had been supplying customers for 25 years would attempt to adulterate it. In some of these cases the sellers were tempted to add water so as to make a little profit, but in this case the quantity was far too small for any profit to be made even if defendant was anxious to turn a dishonest penny. The sample of new milk which was taken at the time turned out perfectly right, although it was to be expected that the adulteration, if any, would have been effected with that.

Mr. Bridge was called, and said that the milk was milked on the night of Sunday, May 2, and that he himself saw it put into the cans for distribution. No water was added as far as he knew. The total cost of the milk in the "bottle" from which the sample was taken was only 9d., and the profit of the adulteration would be 8 per cent of that. (Laughter.)

The defendant denied having added a drop of water to the milk in the cans.

The case was dismissed.

NOT PAID THE OLD FINE YET.

German Dean, 48, Sturge-street, Heeley, milk dealer, was summoned for selling a pint of old milk containing 91 parts of milk and 9 parts of added water, on May 7.

Mr. Sayer, commenting upon the small proportion of water in the milk disclosed by the analysis, said that although it was not very large, it was extremely difficult to catch dealers who made a practice of adulterating their milk regularly, and by minor additions. A small addition of water, pursued for every day throughout the year, would greatly enlarge the dealer's profits.

The inspector took the sample from the defendant in Richards-road, Heeley, paying one penny for the pint he took.

The defence put forward by the defendant was that he did not usually sell old milk, and on the morning in question he bought a gallon for a special customer.

A previous conviction for a similar offence was proved against the defendant in December last, when he was fined £2 7s., or seven days.—The Bench now fined him £1 including costs. It was stated that there was 4s. 6d. of the previous fine which had not yet been paid.

THE COMMONEST EXCUSE.

Alfred Robinson, milk seller, of Heeley Bank Farm, was summoned for selling a pint of new milk which contained 32 parts of milk and 8 parts of added water, on May 7.—The facts in this case were closely similar to those in the preceding instances. Defendant was found hawking milk in Kent-road, Heeley, and sold a pint to the inspector for 2d. His master was stated to be Mr. Ernest Robinson, Heeley Bank Farm.—Defendant told the magistrates that this was not the milk he usually sold. On May 7 he ran short of half-a-gallon, and bought that quantity to make it up.—Mr. Sayer remarked that this was the commonest of all the excuses put forward by dealers detected in selling adulterated milk. The present five cases were the only instances in which proceedings had been taken

out of 60 samples analysed, and he felt justified in saying that the action of the Health Committee had greatly reduced the tendency to adulterate milk and also other articles of food.—A fine of 10s., including costs, was imposed, seven days in default.

IGNORANCE AGAIN.

The next case was that in which George Fletcher, 109, Pond-street, milk dealer was summoned for selling a pint of new milk which was made up of 93 parts of milk and seven parts of added water. The inspector stopped the defendant in Pond-street and bought a pint of milk for three halfpence. The case presented no fresh features, the defendant's defence being that he had just fetched the milk from the station when he was met by the inspector. The milk from which he supplied the sample was exactly as he received it from his employer. He had no written warranty as to the purity of the milk.—Fined 1s. including costs.

WHAT IS A WARRANTY?—INTERESTING DECISION.

The last and most interesting case involved a point of legal technicality of some importance. Briefly, the matter in dispute was whether a guarantee signed by a farmer as to the purity of the milk regularly supplied by him to a dealer, which was signed on a certain date, could be held to cover all future deliveries of milk from that date. The defendant was Clara Hawkesworth, milk seller, 82, Houghton-street, and she was summoned for selling one pint of new milk which was made up as follows: Fat, 2.07; non-fatty solids, 8.24; water, 89.69 per cent., and not being of the quality required by the purchaser. Mr. W. E. Clegg defended.

Mr. Sayer, in opening, said that the results of the analysis of the sample showed that the milk had been deprived of a portion of its natural fat by skimming. He understood that the defence relied upon the following warranty between the defendant's employer and the farmer who was in the habit of supplying her daily with milk: "Grange Mill Farm, near Rotherham. January 21, 1897. The milk supplied by me to Miss Hawkesworth is guaranteed to be genuine new milk. (Signed) Wm. H. Sellars."—His reply to the contention that that document covered every delivery of milk was that it could not be held to cover this specific delivery of May 4, as that would be to extend the warranty to a period six months after its being signed. He quoted in support of this, the decision of Chief Justice Lord Coleridge in the case of *Harris v. May*.

Mr. Waterhouse asked whether Mr. Sayer thought that a warranty could be held to cover the night, as well as the day delivery.

Mr. Sayer supposed it could.

Mr. Waterhouse inquired if the warranty could accompany a delivery at night, why could it not also remain valid for a delivery six months afterwards?

Mr. Sayer pointed out that a label testifying to the purity of the milk was affixed to all the cans at the station, and argued that a similar precaution might be taken in cases such as the present.

Before dealing with the legal standpoint, Mr. Clegg called Margaret Hawkesworth, the dealer, who said she had ten gallons of milk per day from Mr. Sellars. She had dealt with him for three years. She helped to fill the cans on the morning in question, and denied that anything had either been taken out or put into them. She had no guarantee from Mr. Sellars before January.

The defendant was called, and said she was selling the milk to regular customers when stopped by the inspector.

Mr. Clegg said there was no suggestion that Miss Hawkesworth had been guilty of dishonest practices. He contended that Mr. Sayer's legal defence was unreasonable, and that the defendant had done all that she was called upon to do under Section 25 of the Act to guarantee the purity of the milk. The question was:

"Was the sample purchased under the guarantee?" It was unnecessary that a warranty should be given with every specific delivery of milk. The present was a "continuing guarantee." In admitting that it was not indispensable to have a guarantee for both the morning and the evening delivery, Mr. Sayer had admitted the whole principle in dispute. There were three things which it was essential for the defendant to prove, namely, that she had purchased the article in the nature, substance, and quality as that demanded by the prosecutor, with a written warranty; that she had reason to believe at the time she sold it that the article was otherwise; and that she sold it in the same state as it was when purchased. With regard to the last two clauses, he thought the magistrates would find in his favour. It was important, as a matter of trade practice, to decide whether it was necessary for farmers to give a written guarantee of the purity of the milk with every delivery. It would be almost impossible to carry on business if was required.

The Chairman, in giving the decision of the Bench, said that they were of opinion that they could not go against that decision of the Court in the case in which the Lord Chief Justice had laid down the law. They thought the warranty insufficient to cover this particular sample, and they should convict. They were also of opinion that the sellers of the milk thought that the warranty was sufficient, and would inflict a small penalty on that account, warning them to provide themselves with a better warranty in the future. The Bench thought that a label might be fixed to each churn of milk, which would be regarded as a sufficient warranty. The defendant's warranty could not be construed as a continuous one. A fine of 1s. including costs would be imposed.

GLAMORGAN COUNTY COUNCIL AND THE PUBLIC ANALYST.

THE appointment of public and district analyst being held temporarily by Mr. Clarence A. Seyler, according to the standing orders, it became necessary to advertise the post. Consequently, a sub-committee was appointed, which has presented its report as to the terms upon which the new public analyst should hold his office, and the steps that should be taken with the view of making a permanent appointment. The committee recommended that after the first 200 samples of drugs the analyst be paid 15s. for every additional sample, and after the first 200 samples of spirits 7s. 6d. They also advised that the same person be appointed as district agricultural analyst, and all analyses to be personally conducted by him. The report also stipulated that the analyst be required to make quarterly reports, when necessary, a fee of ten guineas a year to be the remuneration for such work. The committee further advised that the analyst attend the quarterly meetings, and that for each attendance, or attendance in court, he be allowed one guinea and second-class railway fare.—The committee adopted the report, and also resolved to continue the present analyst temporarily in office, and to recommend the council to insert an advertisement in the papers.

[We do not see any reason why the council should waste money in advertisements for an analyst, as they will be sure to get applications from the usual half-dozen log-rolling humbugs, none of whom have the capacity to serve the council half so well as their present temporary officer.—EDITOR.]

SUGAR AS A FOOD.

SOME time ago we quoted a description of experiments by an English physician going to show the value

of sugar as a food for hard workers. Additional testimony in the same direction comes from *Die Deutsche Zuckerindustrie* of Berlin, which is quoted by the *Journal des Fabricants de Sucre*. Says the latter paper:—

"Alpine climbers appreciate sugar highly, and many of them who never eat candy at home dispose of notable quantities of it in the course of their excursions. The guides are very fond of it. This is because, as everyone knows, the source of muscular force is not in nitrogenous or albuminous substances (lean meat), but in the carbohydrates (starch, sugar, and fats)."

The German journal gives the following particulars regarding experiments made by Messrs. Schumburg and Züntz, by invitation of the Prussian Ministry of War, with the aid of the dynamometric apparatus of Mosso, to find whether the absorption of small quantities of sugar can give new vigour to fatigued muscles:—

"The experimenters administered in one day, to persons who were not informed of the object of the test, a solution of 30 grams (about an ounce) of sugar, and the following day an equivalent dose of non-assimilable saccharin (oil-sugar). Previously these persons had been caused to do hard work on Mosso's apparatus. It was shown that with natural sugar (cane or beet-sugar) the muscular work done was clearly superior to that obtained with saccharin."

KILLING GERMS IN BOOKS.

"THAT disease is often conveyed by means of books in a public lending library seems beyond doubt," says the *Westminster Gazette*. "For some time Dr. John S. Billings, director of the New York Library, has been experimenting in order to discover a perfect disinfectant. Last year Mr. Horton, under Dr. Billings' direction, conducted a series of experiments in the latter's laboratory in Philadelphia. A number of old Patent Office reports were inoculated with a choice assortment of bacteria, and in a short time the books were full of germs of measles, scarlet fever, small-pox, and other diseases.

"Trials were then made of various germ-destroying substances, and as a result of the experiments Dr. Billings says that he has a perfect disinfectant in the gas formaldehyde. The volume is placed in a glass or metal box with a saucerful of a solution of formalin in water, and left for an hour or two. At the end of that time the vapour has penetrated into every particle of the book, and not a live germ can be found. It is stated that formalin will also destroy the Croton bug, responsible for the ruin of so many fine bindings. The traditional book worm is now a rarity in America, but the Croton bug has taken its place.

MILK.

AT Hamilton, on June 15, before Sheriff Davidson, Archibald Meikle, milk dealer, Millburn-street, Motherwell, was charged under the Food and Drugs Act with having sold milk with 6 per cent. of added water. Evidence was led to show that he sold the milk as he got it from the farmer. He also produced letters, which the Sheriff held were not guarantees in terms of the Act. He was fined £2 16s. 6d., including expenses.

WILLIAM JONES, general dealer, King-street, was summoned at Plymouth for selling milk that contained 24 per cent. of added water, and fined 20s. and costs.

AT Stoke-on-Trent, on June 18, Sampson Leach, milk seller, Burslem, was charged by Mr. Knight, inspector under the Food and Drugs Act, with selling milk from which the cream had been taken without notifying the fact to the purchaser. Mr. R. F. Baddeley appeared for the defendant. — The public analyst's

certificate showed that the milk had been deprived of 20 per cent. of its cream.—Defendant was fined 40s. and 19s. 6d. costs.

AT Merthyr Police Court, on June 14, Paul Carter, milk vendor, was summoned under the Food and Drugs Act for selling milk not of the nature, substance, and quality demanded. The case had already been part heard, and had been adjourned for the purpose of securing the attendance of the county analyst, Mr. Seyler, who was now present, and was cross-examined by Mr. Sidney Simons, who appeared for the defence, upon his certificate, which stated that the milk contained only a percentage of 2.53 of fat.—Mr. Seyler said the minimum standard adopted by the Society of Public Analysts was 2.75, and of about 60 samples of milk received from the Merthyr district during the last half-year the average proportion of fat was 3.6.—Mr. Rees Charles, public analyst of Neath, who was called as a witness for the defendant, said that the Society of Public Analysts, whom he described as a small clique, were endeavouring to usurp the functions of Parliament in trying to fix a standard for milk. In his opinion, milk containing a percentage of 2.53 was not a milk which should be condemned as deficient in fat, and he produced authorities recognising that genuine milk could contain a lower percentage of fat than was found in the present case.—Dr. Charles Simons also gave evidence, and the summons was dismissed, the Bench granting costs to the defendant to the amount of two guineas.

AT Leicester, on June 18, a summons was heard against the Farmers and Cleveland Dairy Company, Limited, Belgrave-gate, for unlawfully selling, to the prejudice of Tom Bent, an Inspector of Nuisances, new milk which was not of the nature, substance, and quality demanded, the same having 8 per cent. of the natural fat of the milk removed.—Mr. James Bell (Town Clerk) prosecuted, and Mr. E. G. B. Fowler defended.—The Inspector stated that at ten minutes to ten on Sunday morning, May 30, he went to 74, Maynard-road, one of the shops of the defendant company, and asked for a pint of new milk. Witness handed the young woman in charge of the shop a jug, and upon receiving the milk paid three-halfpence for it. He then divided it into three parts, as required by the Act, one part being sent for analysis.—The analyst's certificate, stating that the milk in question lacked 8 per cent. of the natural fat, having been put in, the case for the prosecution closed.—Mr. Fowler, for the defence, pointed out that under the 25th Section of the Food and Drugs' Act, 1875, if a defendant could prove to the satisfaction of the Court that he purchased the article sold with a warranty, and sold it as he himself procured it, and that he had no reason to doubt that the article was not as guaranteed, he was entitled to have the summons dismissed. In the present case the defendant company had entered into an agreement with Mr. Barber, a farmer, of Sileby, to supply them with "pure, unadulterated, new milk, with all the cream on," and this milk they supplied to their customers in Leicester, just as it was received, believing that it was unadulterated, according to the contract.—Wm. Bailey, foreman milk-seller, went into the witness-box, and deposed that on the Sunday morning in question he went to the Humberstone-road Station, and by the 8.35 train received a can of milk from Mr. Barber, of Sileby. The label on the can stated that the milk was "pure and undiluted," and "with all the cream on." Sixteen gallons of the milk he took to the Maynard-road shop, and subsequently he went on his rounds with 14½ gallons, leaving the remaining gallon and a-half at the shop. The milk which he left at the shop was in precisely the same condition as he received it at the railway station.—Jane Eadon stated that she looked after the shop in Maynard-road, and that the milk supplied to the inspector was just as it was left by the last witness.—Evidence having been

given as to the agreement with Barber, the Bench dismissed the summons.

The *Leicester Daily Post* says:—"The collapse of a milk prosecution at Leicester Police-court, yesterday afternoon, cannot but be received with some disappointment—if not surprise. It seems to have been practically admitted, even by the defence, that 8 per cent. of the natural fat had been removed from the milk before it was sold. But it was successfully contended that as the defendants had merely sold the liquid in the condition in which they received it, and as they had purchased it under a guarantee for its purity, they were entitled to an acquittal. They accordingly produced evidence to establish the contract and the non-adulteration of the milk after its delivery. The Bench thereupon upheld the defence, and dismissed the summons. Now this was, of course, nothing more than fair to the defendants, under the circumstances. But it can hardly be considered either adequate or satisfactory by consumers, unless it is supplemented, if possible, by further proceedings, and by somebody else being placed on his defence as well. Manifestly, it must be a poor consolation to the customer who buys this 'thinned' milk to learn that the milkseller is blameless, unless he is furthermore enabled to realise that the inseparable burden of responsibility is placed on the right shoulders."

SPIRITS.

At Lambeth, on June 15, Edmund Ferguson, landlord of the "Horns Tavern," Kennington Park-road, was summoned by the Excise for diluting beer.—Mr. Dennis appeared to support the summons, and the defendant was represented by Mr. J. P. Grain.—On March 29, Mr. G. C. Farman, a supervisor of Inland Revenue, visited the defendant's premises and took two samples, one of ale and one of stout. In regard to the ale the Excise made no complaint, but with regard to the stout it was alleged that upon analysis at Somerset House it was found to be diluted, the dilution, in the opinion of the analyst, being equal to the addition of 17-10th gallons of water to the barrel of 36 gallons.—For the defence it was said that the defendant's manager, finding the stout was running low, put some of the waste from the bar into the barrel.—The manager was called, and said the defendant had no knowledge of what he did.—Mr. Grain, in addressing the Court for the defence, said he could not deny that, as the law stood, the defendant was liable for the act of his servant. The case, however, was a hard one, and he submitted that it would be met by a small penalty.—Mr. Hopkins said he did not suppose anyone would accuse the proprietor of the "Horns" of diluting beer in the bad sense of the term, but they had heard a confession of bad cellar management on the part of the manager which had brought very serious consequences upon his employer. The defendant would have to pay a penalty of £25 and £2 6s. costs.

At Ashford, William Collier, landlord of the Swan Inn, Little Chart, was summoned for selling whiskey which was adulterated to the extent of 5·71 degrees of water.—P.C. Peacock proved the purchase of half-a-pint of whiskey, for which he paid 1s. He then asked for half-a-pint of rum. When he handed defendant the bottle for the rum Mr. Collier looked at the bottle, then at witness, and said he must draw his attention to a card placed behind a looking-glass, on which was a notice to the effect that all spirits sold at that establishment were diluted, but not under half-proof strength. Witness then said he did not require the rum.—Supt. Bailey produced the analyst's certificate, and said he told Mr. Collier that the notice should be properly exhibited so that all persons purchasing spirits could see it.—Mr. Bracher contended that he had no case to answer as the police had failed to prove that defendant

was told by the purchaser that the whiskey was required for the purpose of analysis by the public analyst. He was prepared to fight the case on its merits, but he contended that he had no case to go into at all.—The Bench, after retiring, dismissed the case.—Mr. Dering did not adjudicate in this case.

At Ashbourne, Sarah Bridden, of the Plough Inn, Compton, pleaded guilty to selling half a pint of whisky 4 degrees under the standard allowed, on March 26.—Captain Sandys said the whiskey was purchased by his assistant, who divided it, giving one part to Miss Bridden and another to the analyst, whose certificate he produced.—Defendant said she had no idea it was underproof. It was not done wilfully.—Fined £1 and 7s. 6d. costs, which included 10s. 6d. analyst's fee.

At Llandaff, David Hughes, of the Portobello Inn, Taff's Well, was summoned by Police-inspector Williams for selling whiskey 33½ per cent. below proof. He admitted the offence, and, as there had been a conviction against him for a similar offence in 1891, he was this time ordered to pay a fine of 40s. and costs.

BUTTER.

At Ripley Petty Sessions, Arthur Bacon was charged with selling half a pound of butter which was not of the nature, quality, and substance demanded by the purchaser, at Horsley Woodhouse, on April 1.—Mr. F. Searlby, of Ilkeston, prosecuted, and called Captain Sandys, the inspector under the Adulteration Act, who deposed that he bought half-a-pound of butter at defendant's shop, for which he paid 7½d. He sent a portion of it to the county analyst, who returned a certificate to the effect that it contained 19 parts of water, being three in excess of the usual allowance.—Mr. J. White, county analyst, Derby, said he was instructed to pass all butter samples which did not contain more than 16 parts of water, but prosecute all above.—Fined 25s., including costs.

At Hamilton, before Sheriff Davidson, on June 11, James Liddell, grocer, Uddingston, for selling a parcel of margarine without the necessary printed label attached, was fined £2 7s. 10d., including expenses.—Gavin Hamilton, grocer, Stonefield-road, Blantyre, for a like offence, was fined £2 10s., including expenses.

HUMPHREY WILLIAMS, of Queen's-road, Dalston, was summoned by the Shoreditch Vestry, at North London Police Court, for selling margarine as butter. Inspector Quelch said his assistant went to the shop and asked for half-a-pound of shilling butter and a pint of milk. He took the purchase from his assistant, and divided it into three parts. An analysis showed that there was a mixture of foreign fat in the sample. The defendant did not deny the statement of the inspector; but explained that he had been ill, and the care of the shop had been temporarily left to a little girl, who must have changed the tubs, and served margarine instead of pure butter. In serving margarine, it should have been wrapped in a paper on which "margarine" was stamped. In reply to the Magistrate, the defendant said he had not been long in business, and prior to that he had been a coal miner in South Wales. Mr. D'Eyncourt told the defendant that even if a coal miner took to butter-shop keeping he must acquaint himself with the requirements of the trade.—20s. fine and 12s. 6d. costs.

ABOUT a fortnight ago Mr. William Griffiths took possession of 122, Southwark Bridge-road, and began to sell provisions. On June 18, at Southwark, he was fined £5 and 12s. 6d. costs for selling "butter" adulterated with 85 per cent. of margarine. The magistrate thought it was quick work.

At Ripley, on June 14, Arthur Bacon was summoned for selling half a pound of butter which was not of the

quality, nature, or substance demanded by the purchaser, at Horseley Woodhouse, on April 1.—Mr. F. Searby prosecuted, and called Inspector Sandys, who deposed that he purchased half a pound of butter from defendant, for which he gave 7½d. He sent a sample to the county analyst, who certified that the same contained 19 parts of water.—Mr. John White, F.I.C., the public analyst for Derbyshire, corroborated.—Defendant was fined £1 5s., including costs.

SAGO.

At Marlborough-street, on June 16, Mr. Taylor, sanitary inspector, summoned Mr. G. W. Hayward, a grocer, of 14, Shepherd-street, Mayfair, for selling sago which, on analysis, however, turned out to be something containing 100 per cent. of tapioca. Mr. Hayward's defence at Marlborough-street was peculiar. He said he had found that the public would have tapioca because it was white in colour while sago was brown. When persons called for sago and were supplied with it they would bring it back and would insist upon having tapioca, which was, as a matter of fact, rather cheaper than sago. Mr. Plowden said he felt reluctant in the circumstances to convict. It was, however, only right that vendors should sell what their customers asked for. A fine of 10s. with 12s. 6d. costs was imposed.

ADULTERATION IN CLERKENWELL.

MR. J. KEAR COLWELL, public analyst of Clerkenwell, in his quarterly report states that out of 87 samples of "food" submitted to him for analysis by the officers of the Vestry, 11 only were found to be adulterated, and these nearly equally divided between milk and butter. This was but 12·6 per cent. of the total, as compared with 24 in the corresponding quarter of last year, and 27 in the same quarter of 1895. To show that the inspectors allow no article to escape the analyst, a list of the articles investigated may be interesting, viz., milk, butter, cheese, gin, rum, whiskey, coffee, bread, flour, oatmeal, mustard, sweets, pepper, Demerara sugar, margarine, beef sausages, black pudding, brawn, and German sausage.

POISONED BY TINNED SALMON.

On June 16, the wife of Thomas Evans, collier, High-street, Gwersyllt, near Wrexham, became insensible twenty minutes after eating some tinned salmon. A messenger was hastily despatched to the surgery of Dr. Edward Davies, Wrexham, and Dr. L. L. Parry at once went to Evans's house. He found the woman in a state of collapse. He applied the usual remedies, and in about two hours she recovered consciousness.

WHAT BELFAST EXPECTS FOR TWENTY-FIVE SHILLINGS A WEEK.

THE Public Health Committee of the Belfast Corporation do not require that candidates for the position of sub-sanitary officer shall be Bachelors of Science. They require, instead, that they shall be walking encyclopædias. The committee and their officials know best, of course, what they want, and if they can get men capable of correctly answering the long and varied list of questions recently published, for the handsome remuneration of 25s. per week, they are quite right in insisting upon having them.—*Belfast Evening Telegraph*.

BERMONDSEY AND THE ADULTERATION ACTS.

MR. DUNNE called attention to the fines which had been imposed upon tradesmen under the Food and

Drugs Act, and said that some shopkeepers were "marked" by the inspector, and called upon more frequently than others.

Mr. Thomas (the chief inspector), who was granted an opportunity of replying, said, vehemently: I challenge Mr. Dunne or any other member of the Vestry to prove that I mark tradesmen. It is a serious imputation. I have carried out the Adulteration Acts for 21 years, and I defy anyone to say that I do not treat all shopkeepers alike. (Hear, hear).

A NEW DISINFECTANT SOAP.

THERE are many alleged disinfectant soaps offered for sale to the public, but all they have of disinfectant about them is in many instances the name only.

The Sanitas Company, whose various disinfectants are produced under the supervision of the ablest expert on the subject, Mr. C. T. Kingzett, F.I.C., have recently placed upon the market a soap which is a genuine article. It has already received the approval of a number of public institutions. *The Hospital* states that it is "One of the most useful preparations in the market. We have tried it in obstinate cases of Eczema of the Palm, and have found it has succeeded in keeping the skin healthy where everything else has failed."

It is an excellent and pleasant disinfectant soap, and its sale should be encouraged in preference to that of the many bogus disinfectant soaps at present on sale.

GLAMORGAN COUNTY COUNCIL AND THE APPOINTMENT OF ANALYST.

THE Local Government Committee having reported as to the appointment of the County Analyst, and recommended a set of terms on which the officer should be appointed, Mr. J. W. Evans (Aberdare) proposed, and Alderman Davies (Merthyr) seconded, an addition to the effect that the gentleman chosen should devote the whole of his time to the duties of the office. One member remarked that last year the analyst received about £600, but Dr. Morris explained that as the Council did not provide a laboratory there was not nearly so much profit derived from the fees as was imagined.—Sir J. T. D. Llewelyn, M.P., questioned the proposal to join the county analyst appointment with that for the agricultural department. He did not think it was wise to, as recommended, appoint the same man to both offices.—Several other members discussed the matter, after which Mr. Evans withdrew his amendment, and proposed instead that the whole question be referred back to the committee. This was rejected, however, and the recommendations of the committee were adopted.—Subsequently the subject of appointing an analyst of food and drugs and a district analyst was brought forward, when Mr. J. N. Moore (Neath) proposed that the appointment be subject to a year's notice. The chairman ruled this out of order.—Ultimately the meeting approved the terms of appointment suggested by the committee, it being provided that the scale of fees would be revised every three years.

MEAT.

At Coventry, on June 17, James Green, drover, Coundon, was summoned for depositing at a slaughterhouse meat which was unfit for human food, and was fined 10s. and costs.—The Town Clerk prosecuted, and the case was proved by Mr. W. Clarke, sanitary inspector.

MISS BERTHA THURGOOD, who for a year and a-half has served the St. Pancras Vestry as a sanitary inspector, has sent in her resignation. The chief reason is that Miss Thurgood's commencing salary was thirty pounds less and her full salary fifty pounds a year less than the men's. This is also less than that of any other woman sanitary inspector in London, although her work was of a more varied character.

HOW FOOD IS USED IN THE BODY.

(Continued from page 298.)

But there is another balance to be considered—that of energy. In the food we receive potential energy, or, to use a more familiar expression, latent force. When the nutrients of the meat and the bread are transformed in the body, their potential energy is likewise transformed into the muscular energy which the body uses for its work, and into the heat that keeps it warm; and, according to the belief of many investigators, a considerable part is used for intellectual work, for the labour of the brain.

When the energy of the food is transformed in the body, part is given off in the form of heat and part is used for the muscular work which the body performs. Attempts are being made by several European investigators to develop forms of apparatus for measuring the heat thus given off from the body of a man or an animal, and likewise for measuring the heat-equivalent of the muscular work performed. The term "calorimeter" is also applied to such an apparatus for heat measurement. There measurements are being attempted in connection with the experiments here described, and hence the name "respiration calorimeter" has been given to the apparatus.

HOW THE EXPERIMENTS ARE MADE—THE APPARATUS.

The experiments are made with a man inside a cabinet, or a respiration chamber, as it is called. It is in fact a box of copper incased in walls of zinc and wood. In this chamber he lives—eats, drinks, works, rests, and sleeps. There is a constant supply of fresh air for ventilation. The temperature is kept at the point most agreeable to the occupant. Within the chamber are a small folding cot-bed, a chair, and a table. In the daytime bed is folded and laid aside, so as to leave the room for the man to sit at the table or to walk to and fro. His promenade, however, is limited, the chamber being 7 feet long, 4 feet wide, and 6½ feet high. Food and drink are passed into the chamber through an aperture which serves also for the removal of the solid and liquid excretory products, and the passing in and out of toilet materials, books, and other things required for comfort and convenience.

Outside are machinery for maintaining the current of air through the chamber, the apparatus for measuring and analyzing this air. There are also appliances for measuring the heat given off from the body. These, however, are not described, as they are not used for the experiments here reported.

DAILY ROUTINE OF EXPERIMENTS.

The actual carrying out of an experiment is a much more complex matter than the brief descriptions above would imply. The amount of labour involved is very considerable. During the day a force of five or six observers and assistants are employed. During the night, when the occupant is asleep, the force is reduced to three. In the experiments thus far reported the person remained inside the respiration chamber for 2½ days, 5 days, and 12 days. It was necessary, however, as a part of these experiments, to learn just how much of the food eaten was actually digested. For this purpose a digestion experiment was made. This was begun in each case before the respiration experiment, and continued until the end of the latter. In the digestion experiment account was taken of the weights and composition of the food and the undigested residue, the difference between the two showing the amounts of the different ingredients actually digested from the food. On the second or third day of the digestion experiment the subject entered the respiration chamber. The occupants of the chamber passed the time in such ways as were most agreeable under the circumstances. They observed regular hours of eating and sleeping. They had almost no opportunity for exercise, though, of course, they could walk to and fro from one end of the chamber to the other. In one experiment, however, a

special arrangement was made for vigorous muscular labour. The men had abundant opportunity for reading, they conversed with the experimenters outside as they chose, and the monotony was agreeably broken in upon from time to time by visitors.

The routine of each day was somewhat as follows: The night force of operators was relieved at 7 o'clock a.m. The chemist of the night force changed the absorption-tubes for the analysis of the air. The day chemist began his daily round of work. The readings of the air-meter, and of temperature, barometric pressure, etc., were made. The observations of thermometer and hygrometer inside the chamber were noted by the occupant, and telephoned to the observer outside. Inquiries were made as to the condition of the man within the chamber, and any things needed for his comfort received early attention in the morning. Breakfast was ordinarily served at about 7:30 a.m., dinner at 12.30, and supper at 6. The analyses were conducted, and the other details of the experiments, which were very numerous, were regularly attended to.

In former researches of this class, all of which have been made in Europe, the experimental periods have been much shorter, generally twenty four hours or less. There has always been the feeling, however, that such short experiments were less reliable than was to be desired. The details of these experiments show that this suspicion is well grounded, and that to get such results as are really needed, long experimental periods are necessary.

People often express surprise that any one can be found who is willing to stay in the chamber for so long a time. They say, "How can you persuade men to go in there? It must be extremely disagreeable." But really it is not at all uncomfortable. Dr. Tower, who was the subject of an experiment of five days, insists that he rather enjoyed his stay in the chamber. He felt, when he entered, as if he were starting on a sea voyage. "It had this distinguishing feature, however, that the journey was to be made entirely alone. I was the only passenger, and I could talk with the crew only by telephone." It was, of course, more or less monotonous; but between reading, writing, looking out of the window, talking with the experimenters outside, and seeing occasional visitors, the time passed quite comfortably. The last entry in his journal is as follows: "As I watched them preparing to open the doors at the end of my five days' stay, I could hardly believe that I would soon be where I could take more than four steps without turning, and where I could see more of the world than the laboratory window disclosed. The confinement has not hurt me in the least, and I feel as well as ever."

THE EXPERIMENTS THEMSELVES.

The results of four experiments on the transformations of material in the body have been published. The first two, of 2½ days each, were made with Mr. E. Osterberg, a laboratory janitor. The subject of the third was Dr. O. F. Tower, a chemist, and one of the assistants in the investigations of which these form a part. The subject of the fourth was Mr. A. W. Smith, a physicist, and also one of the assistants in the investigations. All were young, vigorous, active men.

(To be continued.)

PERPETUAL MOTION.

A new industry will be started at Freeport, Illinois, says an exchange, on a quarter section of land. An enterprising farmer will establish a thousand black cats, and five thousand rats on which to feed the cats, estimating that the cats will increase fifteen thousand in two years, their skins being worth a dollar each. The rats will multiply five times as fast as the cats and will be used to feed the cats, while the skinned cats will furnish food for the rats. Thus has perpetual motion been discovered at last.—*Lippincott's Magazine.*

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THE PASTEUR (CHAMBERLAND) FILTER.

THE BRITISH MEDICAL JOURNAL (August 25, 1894), says:—
"The invaluable Pasteur Filter for water actually prevents the passage of microbes of any kind, is difficult to break, and easy to clean, and its application for some years in 200,000 quarters of the French Army has shown that it is effectual in preventing epidemics of Cholera, Typhoid Fever, Diarrhoea, and similar diseases."

M. DE FREYCINET (Report of Minister of War to President of the French Republic, *Journal Officiel*, February 14, 1892), says:—
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SIR HENRY ROSCOE, M.P., Ph.D., F.R.S. (*Westminster Gazette* September 8, 1893), says:—"Ordinary filters are no good at all. The only filter that protects the water drinker from the germs is the Pasteur Filter."

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Food and Sanitation.

SATURDAY, JULY 3RD, 1897.

PUBLIC ANALYSTS AND MILK.

To see a public analyst attacking the Society of Public Analysts is not without precedents, but there have generally been personal enmities behind the attacks. Why Mr. Rhys Charles has attacked the Society of Public Analysts is a matter of no public importance, but that he should state that milk containing

2·53 per cent. of fat ought to be accepted as genuine (see FOOD AND SANITATION, June 26, p. 307) is a matter of very serious importance to the consumers of milk in Breconshire, Neath and Carmarthen, which districts he serves as public analyst. Mr. Charles must be strangely unacquainted with world-known investigations into milk analysis or he could hardly have uttered so absurd a statement. The general average of milk, as demonstrated by many thousands of analyses, is at least 3·6 per cent. of fat. This being the case, the Public Analysts' Society's standard of 3 per cent. errs in favour of swindling vendors, and is too low. Somerset House errs further with 2·75 per cent., and in the Merthyr case the magistrates ought not for a moment to have listened to nonsense that a milk containing 2·53 of fat could be genuine average milk. It may be the milk of a single cow, an abnormal outrage on its class, but its product should not be sold—the animal, as an enemy of society, should be pole-axed. It is not surprising that Mr. Charles's extraordinary evidence has caused somewhat of a heated controversy, the following letters having appeared in the *South Wales Daily News*:—

MILK PROSECUTION AT MERTHYR. TO THE EDITOR.

Sir,—Referring to your report of the above, we have the curious spectacle of a gentleman appointed by the authorities of Breconshire, Carmarthen, and Neath, to protect the consumers of food from adulteration practised upon them, appearing in the witness box in Glamorganshire to defend the sale of milk below the customary standard. In the Borough of Neath, Mr. Charles would appear as witness for the prosecution—in Merthyr he appears on the contrary side in similar cases.

Although, perhaps, not without precedent, it certainly seems very unbecoming in anyone occupying the official positions under the Food and Drugs Acts that Mr. Charles does, to attack the society to the members of which, in his capacity of public analyst, he is so much indebted. Far from being a clique, the society comprises all the best and most honoured analysts in the United Kingdom, and its influence is felt even in Somerset House, whilst the proposals of the society have been very largely adopted in their report by the Select Committee on Food Adulteration. The object of the Food and Drugs Acts was to improve the quality of the food supply, and it is disappointing to find analysts, and particularly official ones, appearing to bolster up the sale of inferior articles. In the case of poor milk it is incumbent upon the vendor to prove that it was sold in the same state as when drawn; but there seems, in the above case, to have been no desire expressed to make the 'appeal to the cow.'—I am, etc.,

R. W. ATKINSON,

Member of the Society of Public Analysts.
44, Loudoun-square, June 15, 1897."

Sir,—With reference to Mr. Atkinson's letter in your issue of the 16th inst., it seems to me very unbecoming that evidence not even questioned in the witness-box should be criticised by a person who appears to be in ignorance of the facts of the case. Mr. Atkinson says that "there seems to have been no desire expressed to make an appeal to the cow," but had he been in court he would have been aware that, apart from Dr. Simons and myself, the strongest evidence was called to show that the milk was sold in exactly the same state as when taken from the cow, a fact which the stipendiary, who has as much, or perhaps more, experience of the value of evidence than Mr. Atkinson has of food analysis, must have accepted before he would have given costs against the county: and whatever Mr. Atkinson's opinion may be I still do not consider it unbecoming on my part to try and prevent an innocent man from being convicted. Next

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time Mr. Atkinson wishes to criticise a case I would suggest that he should first of all make himself acquainted with the facts connected with it.—I am, &c.,

RHYS P. CHARLES,
County Analyst for Breconshire.

Sir,—Anent the letter in your issue of to-day from Mr. R. W. Atkinson upon the recent prosecution for milk adulteration at Merthyr, upon which case you report in Tuesday's paper the somewhat startling evidence of the analyst called for the defence of the seller of milk containing only 2.53 per cent. of fat, it would perhaps be interesting to know what standard Mr. Charles takes for judging the quality of those milks he receives to report upon as public analyst for "Breconshire, Carmarthen, and Neath." The analysis of some thousands of milks throughout the country proves milk to contain an average of nearly 3 per cent. of fat, and although we know that there has been isolated cases of a single cow giving milk of less than 2.53 per cent. of fat, it is scarcely reasonable to expect anyone to take this extremely low figure as a basis, but rather the average should be and is taken by food analysts. I trust the Society of Public Analysts, of which I have the honour, like Mr. Atkinson, to be a member, will not be discouraged by the remarks made about them during the hearing of this case, but will continue to do the same good work in future that they have in the past in protecting the public from fraud. I quite agree with Mr. Atkinson in thinking that it is a great pity that official analysts will go into Courts and bolster up poor and inferior articles, and I do not hesitate to say that I believe that if the opinion of every food analyst in the kingdom were asked upon this particular sample of milk 99½ per cent. of them would agree with Mr. Seyler in his opinion. If analysts are prepared to pass such stuff as genuine milk then I fear it is rather a poor look-out for the thousands of children and sickly adults who are dependent upon milk alone for nourishment, to say nothing of the unfair competition that is brought to bear against the sellers of good average milk containing not less than 2½ or even 3 per cent. and over of fat.—I am, etc.,

GEO. R. THOMPSON.

Public and District Agricultural Analyst for Monmouthshire District; Agricultural Analyst for Newport, Mon.

The Laboratory, 57, Dock-street, Newport.

TO THE EDITOR.

Sir,—In criticising the evidence of the County Analyst for Breconshire, Neath, and Carmarthen in the above, it was not my intention to discuss the merits

of the case. But I wish to insist upon the inexpediency of any analyst holding a public appointment under the Food and Drugs Act giving evidence in favour of the genuineness of a sample of milk containing only 2.53 per cent. of butter fat, unless he had personally witnessed the drawing of so poor a sample from the cow. No evidence other than that of his own eyes should weigh with an analyst in so flagrant a case of poor milk. Instead of this, however, he seeks to throw discredit upon the standard adopted by other analysts and by the Society of Public Analysts and Somerset House. Mr. Charles is satisfied that he has done his duty in defending a man he believes to be innocent, but it would be interesting to know if the members of the Councils of Breconshire, Carmarthen, and Neath, who appointed Mr. Charles as official analyst for those districts, will view with equal satisfaction the inevitable result of their analyst's evidence in the case under consideration. This result will be that in the above-named districts it will be possible for vendors of milk, without fear of conviction, to remove something like 20 per cent. of the cream from an ordinarily good milk, because in any case of prosecution the analyst will be confronted with his own evidence that a milk containing only 2.53 per cent. of butter fat is a genuine milk. Surely there are halcyon days in store for milk adulterators in those districts.—I am, etc.,

R. W. ATKINSON.

44, Loudoun-square, Cardiff, June 17, 1897.

Sir,—Anyone reading the letters of Messrs. Atkinson and Thompson in your issue of the 18th inst. would imagine I had no justification for considering a milk containing 2.53 per cent. of fat to be genuine. I cannot believe those gentlemen to be ignorant of the fact that until very recently throughout the kingdom the standard adopted for fat in milk was 2.5 per cent., and from my own personal knowledge this was the figure on which the late analyst for Glamorgan based his results, so that, had the milk been taken a short time ago, it would have been passed as genuine without any question. I am aware that an attempt has been made to alter the standard, an alteration with which I sympathise, but which I say can only be carried out by an Act of Parliament, and not by a body of men such as the Society of Public Analysts, of whose members about 60 per cent., like Mr. Atkinson, are not public analysts. Another misstatement of Mr. Atkinson's is that the standard adopted by the Society of Public Analysts and Somerset House is the same. Both Mr. Atkinson's letters are entirely beside the point, the only question being whether the milk was sold in the same state as when taken from the cow. The case was decided by gentlemen who, in my opinion, were quite as competent as, and certainly in a better position to decide, than Mr. Atkinson, and their decision can leave very little doubt in the mind of any unbiassed person as to the merits of the case.—I am, etc.,

RHYS P. CHARLES,

Public Analyst, Neath.

Well, we are absolutely unbiassed, and we are very sorry to find any public analyst supporting such an opinion. Whether public analysts are "small cliques," etc., does not concern us, but from the point of the public welfare we know that were such folly to be general free fraud in milk would be universal instead of being occasionally punished.

Surely, Mr. Rhys P. Charles ought to know the results of the analyses of Vieth and Richmond? Of 226,009 samples, which showed the yearly average of genuine milk to be 4.1 per cent., the lowest average in any month being 3.5.

The Somerset House standard is stated as 2.75, which allows a heavy margin for fraud. It is as absurd, in the light of these facts, for anyone (and, above all, a public analyst) to assert that milk containing but 2.53 of fat can be genuine average milk as it would be to assert,

that average shamrocks are four-leaved because an occasional four-leaved freak has been found. The Manchester magistrates give scant quarter to nonsense about 2·56, or so of cream. On June 21, at the County Police-court, William Walker, grocer, Upper Lloyd-street, was summoned under the Food and Drugs Act for selling adulterated milk. Mr. Brooks prosecuted. Inspector Keys called at the defendant's shop on the 18th ult. and purchased a pint of new milk. The analysis showed that it had been deprived of part of its cream, either by skimming or by adding separate milk. It contained 2·61 per cent., whereas genuine milk should contain at least 3 per cent. A fine of 10s. and costs was imposed.—James Ogden, of Upper Lloyd-street, Moss Side, was summoned for a similar offence. In this case the milk contained 2·8 per cent. only of fat. The defendant said the milk was sold just as he received it. Mr. Yates said that nearly one-third of its cream had been extracted. The defendant was fined 20s. and costs.—James E. Cooke, of Upper Lloyd-street, also appeared in answer to a summons for selling adulterated milk. The analysis showed, in this case, that the milk contained 2·56 per cent. of fat. The defendant said the milk was sold in the same condition as he received it. He did not know how they could tell that the milk had been skimmed. He considered it hard upon the shopkeepers. Mr. Yates said it was equally hard upon the public, and the defendant would have to pay 10s. and costs.

We commend this common-sense view to the Merthyr magistrates. It is the right one, but the fines are too low.

SPENT GINGER.

MRS. KNOWLES, grocer, St. Anne's-on-the-Sea, was summoned on June 16, for selling ground ginger, which the county analyst certified contained 10 per cent. of spent ginger. Defendant sent the sample left with her by the inspector to Messrs. Marsden and Kay, wholesale druggists, of Preston, from whom she had purchased the ginger, and they had forwarded it to an analyst, who stated that he found the ginger free from admixture with exhausted ginger and foreign substances; it was genuine. The third sample had been forwarded to the authorities at Somerset House, and as the result of their investigation had not yet been received, the magistrates granted an adjournment for a fortnight.—Edwin Jolly, also of St Anne's-on-the-Sea, was summoned to answer a similar charge, for the same reason the case against him was adjourned.

BUTTER.

At Croston Petty Sessions, William Walmsley, grocer, was summoned for selling adulterated butter and for exposing for sale unlabelled margarine. A sample purchased for 1s. 2d. per lb. was found to contain 10 per cent. of water and 55 per cent. of foreign fat. The summons for exposing unlabelled margarine was dismissed, and on the other a fine of 10s. and costs was imposed.—William Winnard, grocer, Tarleton, was similarly summoned. In this case half a pound of eightpenny butter was purchased, and was found to contain 11 per cent. of water and 80 per cent. of margarine. A fine of 2s. 6d. and costs was imposed in each case.—Henry Iddon was summoned for selling at 10d. per pound butter containing 11 per cent. of water and 60 per cent. of foreign fat, and was fined 10s. and costs in each case.—John Southworth, grocer, Mawdesley, was similarly summoned. The sample, sold at 8d. per lb., contained 13 per cent. of water and 75 per cent. of foreign fat. Defendant was fined 2s. 6d. and costs in each case.

At Bedford Petty Sessions, George Goodwin Briars, grocer, was charged with exposing unlabelled margarine for sale and with having sold half a pound of margarine to Sarah Hillyard, and also with having sold half a pound of margarine to Mary Carroll, which were not wrapped up in paper on which the word "margarine" was printed as required by the Act. William J. Phillips, assistant, employed by Mr. Briars, was charged with a like offence in respect to the two half-pounds of margarine; the information against him being laid by Mr. Briars, the defendant in the other cases. Police-sergeant Mason said that on May 13 he saw Mr. Briars' provision cart at Cardington in charge of an assistant. In the cart a quantity of provisions were exposed, among them being two boxes, one of which had the word "margarine" written in pencil on the end. He asked the assistant what the box contained, and he replied, "Margarine." On his attention being drawn to the box not being branded, the assistant said, "I could not find my branded box this morning, so I wrote margarine on this box myself, but I always serve it in margarine papers," pointing at the same time to some margarine papers in the cart. Being cross-examined, he said the box with the margarine fitted into a recess in the cart, the only part of it visible when witness looked into the cart being the end. On that end the word "margarine" was written in bold letters, probably of the size required by the Act. There was no lid on the box. He bought a pound of butter, which, on being analysed, was found to be all right. Mr. Stimson, who appeared for Mr. Briars, contended that there had been no exposure for sale. The box fitted into a recess, and no one looking into the cart in the ordinary way could say that the margarine was on view. In support of his argument he quoted the case of *Crane v. Laurence* decided in the Queen's Bench Division in 1890, the judges (Mr. Justice Cave and Mr. Justice Smith) holding that no offence was committed if the margarine was not exposed to the view of the purchaser or the intended purchaser. Police-sergeant Mason, replying on the point of law, said the margarine was exposed for sale to him when the box was drawn out of the recess of the cart. The Magistrates considered that there was an exposure for sale, and fined the defendant £1 and costs. Mr. Stimson asked for a case to be stated on the point he had raised, the magistrates granted the application. In the other case the Magistrates found that the two offences of selling the half-pounds of margarine in unmarked papers were proved, and to these charges the assistant pleaded guilty. Mr. Briars gave evidence that he always provided proper boxes and papers required by the Act. He was not at home when Phillips took the cart out on May 13. For the sale to Mrs. Hillyard, Phillips was fined £1 and costs, and for the sale to Mrs. Carroll £2 and costs, the charges against Mr. Briars in respect of these sales being dismissed.

At the Stratford Petty Sessions, recently, Elizabeth Blower, grocer, 134, Catherine-road, East Ham, was fined 20s. and costs for exposing unlabelled margarine for sale.—For similar offences, Emma Holland, 8, High-street, East Ham, was fined 20s. and costs; and Charles Diggins, 3, Market-place, East Ham, 40s. and costs.

FOOD ADULTERATION IN BELGIUM.

THE Board of Trade have received through the Foreign Office a copy of the third biennial report on the measures taken by the Belgian Government in carrying out the law relating to food adulteration, and on the effects of the said law.

During the four years 1890-94 the Belgian Government published regulations from time to time relative to utensils and receptacles, artificial colouring, saccharine and other sugar products, meat, milk, artificial

butters, flours, &c., coffee, chicory, mustard, vinegars, cocoa, chocolate, beer and yeasts, and more recently, in the years 1895-96, Royal Decrees have been issued with regard to the trade in lard and other edible fats, butter and margarine, oils, honey, sugar, fruit pulps and juices, confectionery jellies and syrups, as well as beers. Regulations have been drawn up relating to brandies, alcoholic liquors and alcohols, as well as with regard to cattle food; and finally, regulations concerning the trade in wines are under consideration.

During the period 1895-96 the number of cautions given to traders by the inspectors for non-observance of the regulations showed a considerable decrease, having been 7,000 only as compared with 11,000 for the preceding biennial period. The fact is, says *The Grocer*, that honest traders, who disobeyed the regulations through ignorance, have taken care to conform to them, whilst the dishonest, who have disregarded the cautions previously given, have found themselves confronted with the law; and this fact explains the considerable increase in the number of summonses issued, which has risen from 886 for the period 1893-94 to 2,859 in 1895-96. Additions to the staff of inspectors have contributed to a more thorough exposure of the frauds connected with the most important articles of food, which have been examined in greater numbers. The result is a decrease in the proportion of articles exposed for sale in a manner not in conformity with law. The following table shows the proportion per cent. of groups of articles examined which were found not to be in accordance with the law in the last four years:—

| Articles. | 1893. | 1894. | 1895. | 1896. |
|-----------------------------|-------|-------|-------|-------|
| Meats per cent. | 13 | 6 | 3 | 4 |
| Butter and margarine | 27 | 21 | 8 | 7 |
| Flour and breads | 30 | 23 | 16 | 13 |
| Beers | 35 | 18 | 16 | 9 |
| All foods products | 20 | 17 | 11 | 9 |

The improvement is especially noticeable in the observance of regulations which compel the trader to indicate to the buyer by means of labels or inscriptions the nature and composition of the product sold. The use of lead or brass receptacles for beers has considerably diminished, and tends to disappear.

As far as adulteration itself is concerned—a matter much more difficult to detect—the improvement is also very marked, although the small shopkeeper is not always able to guard against the attempts of dishonest manufacturers or wholesale houses which supply him with adulterated products without his knowledge. The result has been obtained by the vigilance of the inspectors, and the severity of the courts; fined sometimes very heavily, these unscrupulous merchants have been compelled to desist from their illegalities.

HERBAL BEER EXTRACTS.

"We question if the time has not come," says the *Fruit Grower*, "when sharp supervision should be made of the sale of so-called herbal beers and extracts, also fruit juices and fruit salts, which contain no real herbal essence or a trace of real fruit. Surely it is a form of deception which should be stopped by the authorities, for if the public is led to purchase regularly and freely of such specialities, believing them to be made from fruit and herbs, when in reality they are unwholesome concoctions emanating solely from the laboratory of the chemist, the tendency must be to injure the sale of the products of the fruit-grower, since no compound should be permitted to be sold as made from fresh fruit, for instance, unless such was really the case. People buy such products because they know that anything made from fresh ripe fruit must be wholesome, and if they imagined that they were being deceived they would not purchase these imitation products at any price. We think the increasing trade in the specialities referred to deserves the attention either of the Board of Trade or the President of the Agricultural Department.

CAMBERWELL AND ADULTERATION.

MR. ROSE put a number of questions to Dr. Teed, the public analyst (who reported that during the last quarter the percentage of adulterated articles analysed was 20·1 per cent.), with respect to his description of the articles. "Dyed sugar other than Demerara" was, Mr. Rose contended, a term applied to what was possibly a better sugar than real Demerara, only it came from Barbadoes.

Mr. Cox, pursuant to notice, moved that the following motion, adopted in November, 1895, be rescinded, viz.: "That the Vestry publish the names, addresses, offences, and convictions of persons under the Food and Drugs Act (and food unfit for consumption) on the Vestry notice boards, the depôts, and on the other public buildings, etc., belonging to the parish after second offence."

Mr. Aldridge seconded the motion.

Dr. Smith thought that as regarded the adulteration of such an article as milk they should press for every possible indignity and penalty upon tradesmen who damaged the health of the rising generation.

Mr. Rumney Smith wanted to know how and under what law the Vestry were entitled to publish the names of offenders under the Adulteration Act.

Mr. St. Cedd declared that it was an illegal act on the part of the Vestry to pillory tradesmen.

Mr. Clemo said there was no law prohibiting the Vestry to publish the names. It was the poorest of the ratepayers who suffered by adulteration.

Mr. Phillips observed that the "pillory" proposal, as originally passed, came from the Moderates, and was

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"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,

Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London;
Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions,
London; Author of 'Food, Diet, and Digestion,' etc."

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These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

warmly espoused by Mr. Helby and the vicar of the parish, Mr. Kelly.

Mr. Somerville did not think the Vestry were qualified to undertake judicial functions.

Mr. Tomkins said the only way to put a stop to adulteration was to label the adulterator.

Mr. Towler thought that if shopkeepers who adulterated were pilloried, builders who scamped work ought to be strangled. ("Hear, hear," from Mr. Tomkins.)

There was a scene of great disorder after the "closure" had been put and carried by the Moderates on a show of hands. Several Progressists called for a division, but the Chairman disallowed the request, and he also refused to listen to various points of order that were raised. The Chairman called upon Mr. Cox to reply. This that gentleman proceeded to do amid insistent demands for a division, while Mr. Dodson rose and addressed the Vestry at the same time that Mr. Cox was speaking. After considerable confusion, the division was taken, with the following result: For rescinding, 51; against, 32; did not vote, 3. The Chairman stated that as the necessary two-thirds majority to rescind had not voted, the motion was not carried. The result was received with loud Progressive cheers, Mr. Fosten cheering with much gusto, and leading a number of other gentlemen in the singing of "Rule Britannia!"

THE MERCHANDISE MARKS ACT.

JAMES HATTEMORE, senior and junior, 176 and 178, Well-street, Hackney, were summoned, on June 18, at the instance of John Johnston, an inspector of the Bacon Curers' Association of Great Britain and Ireland, for that on April 2 last they did unlawfully apply a false trade description to certain goods—to wit, that they did describe "a short-cut American pic-nic" as an English ham.—Mr. Weeks, solicitor, prosecuted for the Association; Mr. Tilly defended.—Mr. Weeks said that these proceedings were taken under the Merchandise Marks Act. The association which he represented had for a long time past known that certain traders had been selling these American hams as English, and on their representations the Government had undertaken a series of prosecutions. The result had been that in some parts of the country the full penalty of £50 had been imposed. It was hoped that these penalties would prevent others from defrauding the public, but the association still found that among the small class of traders the American article was generally supplied when the English ham was asked for. Such practices caused considerable loss to the home trade, and especially to Ireland, who depended so largely on her bacon trade. The facts were these:—On April 2, Inspectors Moore and Johnston, acting on behalf of the association, visited the defendant's premises—a butcher's and a provision dealer's—and asked for an English ham. They were served by the younger defendant with the short cut American shoulder, and the price charged was 6½d. per pound. At Mr. Moore's request young Hattemore wrote out a bill in which the article purchased was described as an "English ham." The facts were not disputed, but Mr. Tilly urged that the elder defendant was away at the time, and the latter acted in ignorance.—The younger defendant, called as a witness, said that he was a butcher, not a cheese-monger. He had no knowledge of hams, and he had no idea what the article was when he sold it.—Mr. Weeks said that the price of the article as an American shoulder should not have been more than 4½d. per lb.—Mr. d'Eyncourt: And what is the price of English ham?—Mr. Tilly: 1s. or 1s. 1d.—The elder defendant admitted that he only paid 3½d. a pound for the hams, buying them by the hundredweight. He did not keep either English meat or English hams. Both were

unsaleable at his shops.—Mr. d'Eyncourt held that there had been a contravention of the Act, and fined the father 20s. with £2 2s. costs, and the son 5s.

GELATINE SUBSTITUTE FOR GLASS.

REPORTS from Germany are to the effect that the gelatine substitute for glass called tectorium has been found very satisfactory in practice in that country, for the following reasons: (1) It can be bent without being broken; (2) it is both tough and flexible; (3) it is not softened by the rays of the sun; (4) is non-soluble; (5) is not affected by severe cold; (6) is a bad conductor of heat; (7) is well adapted for roofs, on account of its extreme lightness; (8) when exposed to the sun it loses its original yellowish colour in time and becomes harder and more durable; (9) can be made, by a very cheap process, to imitate stained glass in such manner that it cannot be distinguished from the genuine article; (10) can be cut by shears, nailed to wood, and transported without danger; (11) can be easily repaired in case it is cut; (12) does not break; and (13) is well adapted for factory windows and skylights for hothouses, market halls, verandas, transportable buildings, and for roofing. The consul states that it is sold in small quantities in a few places, but that it is not known to the general public, and as a commercial product is still an experiment.

IMITATION LINSEED OIL.

ACCORDING to the *Revue Internationale des Falsifications*, an imitation linseed oil is now being prepared from the following unlikely ingredients:—Crude petroleum, 4 to 6 litres; resin, 115 to 225 grams; zinc sulphated, 50 to 120 grams; yellow wax, 115 to 125 grams; lead acetate, 60 to 120 grams; caoutchouc, 15 to 30 grams; and linseed oil, 225 to 450 grams, boiled together for seven hours.

SPIRIT OF NITROUS ETHER.

AT Northfleet, on May 24, Charles R. Sharman, 5, Dover-road, Northfleet, was summoned for, on April 20, unlawfully selling to Superintendent Lacy, Inspector of the Food and Drugs Act, and to his prejudice, a certain drug, to wit, spirit of nitrous ether, which was not of the nature, substance, and quality of the drug demanded by him, being deficient of its active principle, nitrous ether, containing only 1·36 per cent., whereas by the British Pharmacopœia it is required it should contain 2 per cent., the said drug so sold as aforesaid being, therefore, 32 parts per cent. deficient of nitrous ether.—Mr. J. H. Chambers appeared for the defendant.

P.C. Andrews said, according to instructions received from Superintendent Lacy, he entered the defendant's premises, and asked for four ounces of nitrous ether B.P. This was served by the manager, and he then told him that the articles were purchased for the purpose of analytical test to be made by the county analyst at Maidstone.

Superintendent Lacy said on the 20th ult. he directed the last witness to go to Mr. Sharman's shop and purchase certain articles, amongst them four ounces of spirit of nitrous ether. In the presence of the manager of the shop he divided that into three quantities; one he left with the manager, one he sent to the county analyst at Maidstone, and the other he produced that day in Court. He also produced the analyst's certificate, which showed the following:—"I am of opinion that the same is a sample of adulterated spirit of nitrous ether, because it is deficient of its active principle, namely, nitrous ether, containing only 1·36 parts per cent., whereas by the British Pharmacopœia it is

required it should contain 20 per cent.; therefore it is 32 parts per cent. deficient."

Dr. Matthew Algernon Adams, public analyst for the county, who had been called as a witness for the prosecution, at the request of the defendant's solicitor, for the purpose of cross-examination, said he had held his position as county analyst for over twenty years. He was often engaged in analysing nitrous ether. He did not take the specific gravity of the sample because he thought it unnecessary, seeing that he had no occasion to do so. He then proceeded to give a lengthy description of the analysis. The essential ingredient was ethyl nitrite, and that was the substance he searched for.

Mr. Chambers: What authority have you for saying it was deficient so as to be prejudicial to the customer?

The witness explained that according to the Pharmacopœia the bulk of the nitric oxide gas which should be given off by the sample should be at least five times the bulk of the sample operated upon. In this case the bulk of gas given off was much less than that. He operated on three measures of the sample, which he had divided into two parts. In the first case the result was 11·4 volumes, and in the second 11·3. Those amounts divided by three were not nearly 5 volumes, which the material ought at least to have given out. He made an allowance of 1·5 for the solubility of the materials, because a certain amount of this gas was dissolved by the fluids. The 11·4 was the yield of the gas, excepting that portion which he had allowed for solution.

Mr. Chambers then addressed the Bench on behalf of his client, and said what he really wished to put before their Worships was that the standard set up by the county analyst was an arbitrary one. He urged that the tests had not been carefully made, because in order to get the correct results the tests should be made to a nicety. He also alluded to the Pharmacopœia, which stated that freshly prepared the compound should yield seven times its volume of nitric oxide gas, and even after it had been kept some time it should not yield less than five volumes of gas. According to the analyst's figures, the result of the test of defendant's sample was 4·3 instead of five volumes. Nitrous ether would evaporate at a low temperature, and to this he attributed the disparity in the samples taken from defendant's shop, because it was sold from a bottle which was often unstoppered throughout the day, in order to serve customers. The article had not been sold to the prejudice of the customer.

Superintendent Lacy here asked that the Bench would adjourn the case, in order that the remaining sample might be tested at Somerset House.

The Bench decided to hear the evidence of the other side first.

Benjamin Horatio Paul, Doctor of Philosophy, Fellow of the Institute of Chemistry, and consulting and analytical chemist, said he had a sample of nitrous ether handed to him for analysis, fairly well closed, but not in a stoppered bottle, sealed with the seal of that Court, and signed "G. Lacy," on Monday, May 17. He analysed this as directed by the British Pharmacopœia. That sample was taken on April 20. The result was a volume of gas, which, after being corrected for temperature and pressure as mentioned by the British Pharmacopœia, measured 20 centimetres and 6/10ths, equal to 4·1 times the volume of the spirit. He also made the normal allowance for solubility of one and a-half centimetres of gas on five measures. That was the regular amount. According to the figures of the county analyst, the volume of gas was 4·3 times the measure. The specific gravity was one of the characters which should be taken into account. The result he gave was for gas measured at 60 deg. Fah. Taking Dr. Adams' observed volume and calculating, it gave 1·62 per cent. nitrous ether, whereas Dr. Adams had worked it out incorrectly and showed that there was only 1·36 per cent. There was a similar error as to the percentage equivalent to five volumes, which Dr. Adams

had given as 2 per cent., whereas it was 1·88. This preparation was one notorious for its instability, and as an example of this he gave the results of a second analysis made on the 22nd inst., when there was a considerable difference. Taking Dr. Adams' figures or his own, the sample was within the limits prescribed by the Pharmacopœia, because it gave great latitude.—The case was then adjourned for three weeks, for the analysis of the third sample to be made at Somerset House.

At the adjourned hearing of the case on June 14, the inutility of the reference to Somerset House became apparent from the report sent in, stating that the sample submitted for analysis was received in a state unfit for the purpose, as it was in a bottle only partly filled, and imperfectly corked. Under these circumstances the analytical results obtained were considered not to afford the Court any useful assistance in arriving at the true composition of the sample at the time of purchase. After retiring for some time the magistrates announced that they had come to the decision that they would dismiss the summons and give the defendant the benefit of the doubt.—*Pharmaceutical Journal*.

MR. T. W. RUSSELL AND THE NEW ADULTERATION ACT.

MR. T. W. RUSSELL, M.P., the Parliamentary Secretary to the Local Government Board, made an extra-Parliamentary statement on June 16, which has not, so far as we have been able to discover, found its way into any of the public journals. The occasion was what for brevity may be called the Jubilee Dinner of the British Institute of Public Health, at which Mr. Russell was the principal guest. Responding for the toast of "The Public Health Service," Mr. Russell, by means of a few figures, emphasised the fact that during the last half century sanitary science and matters relating to public health generally had made vast strides. And then he disclosed, says the *Grocers' Review*, what perhaps may be within the knowledge, say, of the Parliamentary Committee of the Grocers' Federation, but cannot be known to the general body of traders throughout the country. He said that while much had been done, and was still being done, in the direction of improving the public health, there were many matters in which reform was sought which were being daily urged and pressed upon the attention of the Local Government Board, with a view either to legislative or administrative action. The first question he mentioned as coming within this category was that of the Sale of Food and Drugs, "involving," he added, "the question of adulteration." Mr. Russell stated the case with regard to this matter with his usual directness and plainness. It will, doubtless, be remembered by our readers that, towards the close of last month, Mr. Balfour informed Mr. Dillon that the Sale of Food and Drugs Bill would be introduced this session, but that he did not think there was much chance of its being passed into law. In a sort of postscript Mr. Balfour added that if it should unexpectedly turn out that there was a universal enthusiasm for the Bill, it might possibly be carried even during the present session. This reply was evidently in Mr. Russell's mind when he dealt with the subject recently, and the whole tenor of his remarks carried with it the implication that there was no reason why the Bill should not become an Act, even this session. The question, he pointed out, had been exhaustively considered by a Select Committee of the House of Commons, their investigation into the ramifications of the subject extending over a period of no less than two years. The committee had, he said, presented a most elaborate report to Parliament, and the tone in which he uttered that remark suggested that, but for official trammels, he would have added, "and legislative action should at once follow upon the lines of that report." The whole inference of his statement was that he was absolutely convinced that something should

be done, and done quickly, with a question which, he said, so nearly affected the public health of the country. The concluding sentence of his reference to the matter was clearly indicative of Mr. Russell's attitude upon the subject. "There are," he said, "many conflicting interests to be considered, but the one interest which ought to be considered above everything else, is the public interest—the interest of the consumer of these articles, and especially of the staple articles of food, such as milk and butter." We gather from an unofficial source that Mr. Russell's experience of the inequalities, shortcomings, and deficiencies of the present law upon this subject—gained as the chairman of the Food Products Adulteration Committee—has made him an earnest advocate of reform in this direction, and that such interest as he possesses in the councils of the Government is being exercised towards a speedy and effective dealing with the subject.

WOMEN SANITARY INSPECTORS.

ON June 23, a deputation from women's association, headed by the Hon. Mrs. Bertrand Russell, urged upon the St. Pancras Vestry the desirableness of appointing another lady as sanitary inspector of workshops in the stead of Miss Thurgood, resigned. Mrs. Russell pointed out how necessary it was that the sanitary inspector, whose business it was to examine workshops and factories where females were employed, should be of the same sex. It was obvious that in many matters which affected a woman worker's health and comfort she could not speak so freely to a male as to a female inspector.—Mr. Close, the Chairman of the Health Committee, remarked that, with their experience of the need and great utility of female sanitary inspectors, they were unanimously of opinion that another female inspector should be appointed in the place of Miss Thurgood, whose work had been thoroughly satisfactory. It was unanimously decided to accede to the wish of the deputation.

SHEFFIELD'S NEW MEDICAL OFFICER OF HEALTH.

THE St. Helens Corporation Health Committee, on June 23, passed a resolution expressing their sincere regret that St. Helens was losing so able an official as Dr. Robertson had proved himself to be, their keen sense of the advantage which has accrued to the borough from his work, and the energy, readiness, and tact with which it has been carried out, and congratulating him upon the promotion afforded by his appointment as Medical Officer of Health of Sheffield. It was further decided to present to Dr. Robertson a copy of the resolution, sealed with the common seal of the Council.

OLIVE OIL.

AT Havant Petty-sessions, on June 19, William James Pennekett, grocer, Waterlooville, was summoned for selling a vegetable oil in the place of olive oil. Mr. Benjamin Kent defended. It appears that a purchase was made at the defendant's shop, on behalf of the police, of a flask of olive oil on June 2, but upon the same being analysed it was certified by the county analyst to be vegetable oil and not olive oil. Mr. Kent, in defence, said the facts were not disputed. It was a most unusual thing for the defendant to be asked for a flask of olive oil, and the assistant who served the oil served the only flask oil kept. The price charged was that of usual vegetable oil, and was only one-third of what genuine olive oil would cost, so that he urged there was no attempt to substitute an inferior article for that demanded. The Bench were of opinion that there was no intention to defraud, and ordered defendant to pay the costs only.

CURRANT JELLY AND TOMATO CATSUP.

THE State of California has not an enviable reputation in the matter of food adulteration. In the latest Consular report it is stated that out of 33 samples of currant jelly bought in San Francisco for analysis from as many different grocers—some of them prominent and leading firms—only 9 were found to be pure. Many had no currant juice at all in them; 10 were found to be dangerous as food from the ingredients of which they were composed. The so-called currant jelly consisted either entirely or chiefly of glucose, apple jelly, starch, and acetic acid, coloured with aniline dyes. Of 26 samples of tomato catsup analysed during December, 10 were manufactured in San Francisco or its vicinity, and 9 of these were impure. Yet the tomato is one of the most plentiful fruits grown in the State. It might be worth while were inspectors to sample some of these articles sold in the United Kingdom.

MILK.

AT Liverpool, on June 23, James Robinson, milk dealer, 174, Rathbone-road, was summoned for having sold new milk which had been deprived of upwards of one-third of its cream. The defendant's wife pleaded that the offence had arisen through accident, on account of the milk not being stirred up before it was given out. A fine of 40s. and costs was imposed.—John Dent, milk dealer, 86, Ullswater-street, was summoned under two informations, one for having sold milk that had been adulterated to the extent of 12 parts of water to every 100 parts of the poorest milk and had been deprived of part of its cream, and the other for selling as new milk skim milk which contained 9 per cent. of water. He was fined 40s. and costs on each information.—Rees Jones, milk dealer, 19, Rutland-street, for having added 7 parts of water to every 100 parts of the poorest milk, was ordered to pay a fine of 40s. and costs.

AT Birmingham, on June 25, Harry Perry, shop-keeper, Owen-street, was summoned for selling milk from which 28 per cent. of cream had been extracted, and not giving notice of the fact to the purchaser.—Mr. Hiley (Town Clerk's office) prosecuted, and Mr. Restall appeared for defendant.—Inspector Jones stated that half-a-pint of milk purchased on the 26th ult. proved to be deficient of 28 per cent. of natural fat.—The defence was that the milk was sold in exactly the same condition as received from the farmer.—Mr. Fisher: And you have a warranty?—Mr. Restall: Yes.—Mr. Carter (Magistrates' Clerk) advised the Bench that the document was not a warranty in the particular case, but a general agreement to supply pure milk to a person other than defendant.—George Chester, miller and farmer, Shepshed Mills, and Robert Dyer, carter, in the employ of Mr. Adamson, dairyman, Irving-street, gave evidence of the delivery of the milk into the charge of the railway company, and its reception from them.—Other witnesses who dealt with the milk before it reached defendant swore that it was in no way tampered with.—The Bench expressed themselves satisfied that defendant was liable, and imposed a fine of 60s. and costs. They refused to state a case asked for on the ground that the analysis as described in the certificate was imperfect and misleading.—George William Willis, Manor House, Fil-longley, farmer, was summoned for having consigned a quantity of milk as pure from which 22 per cent. of cream had been extracted.—Mr. Hiley prosecuted, and Mr. Hirst defended.—Inspector Jones took two samples of milk from churns at New Street Station on the 27th ult., and, on being analysed by Dr. Alfred Hill, one was found to be deficient of 22 per cent. of cream.—Defendant said he was present when the cows were milked, and travelled by the same train as the milk. It

was a mystery to him how the milk was deficient of cream.—A fine of £5 and costs was imposed.

HOW FOOD IS USED IN THE BODY.

(Continued from page 310.)

EFFECTS OF MUSCULAR AND MENTAL LABOUR.

The subject of the fourth experiment, which continued twelve days, was twenty-two years of age. He weighed 156 pounds without clothing, and was in excellent condition, both mental and physical. His early life had been spent upon a farm in Vermont, but the later years had been passed in school and college, and in the work of an assistant in the college laboratory. These occupations involved but little muscular activity. He was accustomed, however, to take a fair amount of exercise with his bicycle and otherwise. He was a small rather than a large eater. A study of the diet of his family, made by him on the occasions of visits at home in both summer and winter, showed that the food consumption to which he had been accustomed was rather small, especially in the amount of protein.

His diet was of his own selection, as in the other cases. He assumed that with the small amount of physical exercise which he would have during most of the time, somewhat less food would be needed than he was accustomed to consume. The results showed that in attempting to reduce the supply to what he presumed would be the need, he made the diet too small, so that it did not quite suffice to meet the needs of his body. The daily food and the amounts of nutrients were as follows:

Experiment No. 4. A. W. S., Physicist. 12 days.

DAILY MENU.

| Breakfast. | Grams. | Dinner. | Grams. | Supper. | Grams. |
|----------------|--------|---------------|--------|-------------|--------|
| White bread | 75 | Beefsteak ... | 96 | Milk | 500 |
| Oatmeal | 40 | White bread | 75 | Brown bread | 250 |
| Beans, baked | 120 | Potatoes ... | 100 | | |
| Milk | 150 | Butter ... | 30 | | |
| Butter | 15 | Apples ... | 125 | | |
| Sugar | 20 | | | | |

NUTRIENTS AND ENERGY IN DAILY FOOD.

| | Protein. | Fat. | Carbohy- drates. | Fuel value. |
|-------------------------|----------|--------|---------------------|-------------|
| | Grams. | Grams. | Grams. | Calories. |
| In total food | 101 | 65 | 329 | 2740 |
| In food digested | 93 | 62 | 321 | 2500 |

The whole twelve days of the experiment were divided into five periods. Of these, however, the first period of $1\frac{1}{2}$ and the final period of $1\frac{1}{2}$ days were regarded as preliminary and supplementary to the periods of actual experiment. They made together three days, during which Mr. Smith did no muscular work, but passed the time in reading, or otherwise, as was most agreeable to him. The remaining nine days were regarded as belonging to the experiment proper, and were divided into three periods of three days each.

The first of these three experimental periods was one of severe mental labour, during which Mr. Smith worked eight hours a day or thereabouts at the table, partly in computing results of previous experiments and partly in studying a German treatise on physics. The mental application was as severe as he could well make it, or, as he expressed it in college parlance, "It was good, hard grinding."

The second period was one of as nearly absolute rest as possible. He sat at the table or reclined upon the cot during the day, sleeping, of course, at night as usual. He says very aptly, "I tried to vegetate, and think I succeeded pretty well."

During the third experimental period, likewise of three days, Mr. Smith engaged for eight hours a day in raising and lowering a heavy weight which was suspended by a cord passing over a pulley at the top of the chamber. The cord was grasped by a handle at one end, and the raising and lowering were done by movement, not of the arms only, but of the whole body. The exercise was decidedly severe, and the day's work exhausting.

(To be continued.)

CORRESPONDENCE.

THE UNITED STATES AND DAIRY PRODUCTS.

To the Editor of FOOD AND SANITATION.

SIR,—Excuse the liberty I take in asking the courtesy of your columns, through which I wish to congratulate the English consumers of dairy products in the coming to the United States of W. A. M'Knight, Esq., of Liverpool, in their interests. It is certainly a great evidence of public spirit for one to voluntarily cross the ocean and come to this country in the behalf of honest trade. The consumers of dairy products in Great Britain, and all believers in honest business methods, will, I am sure, from now on, owe to Mr. M'Knight a debt of commercial gratitude, as I am confident that his presence here and his efforts in the direction towards the suppression of the vile frauds and imposition practised upon the English dairy consumer by unscrupulous American manufacturers and middlemen, who have practised fraudulently the handling of imitation cheese, will result in immense benefit to the English people and thousands of American dairymen.

Mr. M'Knight was warmly received by Secretary of Agriculture Wilson, Secretary of the Treasury Gage, Acting Commissioner of Internal Revenue Wilson, and our Chief Magistrate, President M'Kinley. These gentlemen, as well as the President himself, assured him that prompt and effective action would be taken to protect purchasers and consumers of American cheese abroad, as well as the producers of the same at home, from having the "imitation article" foisted on them as pure cheese.

British patrons should not labour under the false impression that imitation dairy products are the result of artifice on the part of the American farmer or dairyman, but the fraud should be lodged where it properly belongs, to wit:—Adulterated cheese, known here as filled cheese, has been made by unscrupulous manufacturers who have purchased the pure milk from the innocent farmer and extracted the butter fat therefrom, after which they "filled in" a product made from hog fat, known here as "neutral lard"; hence the name "filled cheese."

It was my pleasure and privilege to have been in a position whereby I could render assistance to Mr. M'Knight, during his visit at the national capital, in a small way, through my acquaintance with the proper officers, and only wished that I could have rendered greater service. I will state, however, that I promised Mr. M'Knight, before he left the city, that it would be my aim to look after matters on this side, and not allow to slumber the good work which was the result of his visit.

I have the honour to be, with high regard,
Very truly yours,

D. F. WILBUR, M.C., 21st Congressional

District, New York.

House of Representatives, U.S., Washington, D.C.,
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M. DE FREYCINET (Report of Minister of War to President of the French Republic, *Journal Officiel*, February 14, 1892), says:—
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St. Petersburg Place, Bayswater, London, by M. H. Droop Richmond, F.I.C., F.C.I.
Member of the Society of Public Analysts, the Company's Resident Analyst.
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WATER, and 22 of SUNDRIES."

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Food and Sanitation.

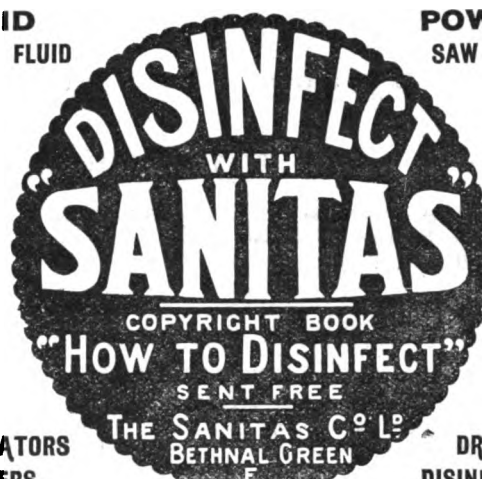
SATURDAY, JULY 10TH, 1897.

THE YORKSHIRE RELISH CASE. IMPORTANT TO TRADERS.

At last the final stage in this unwarrantably protracted litigation has been reached, and the result is one which is reassuring to straightforward traders, and will be hailed with satisfaction by all who believe that trade competition does not justify the filching of a rival's good name or property. English law, however many

FLUID
CRUDE FLUID
OIL

POWDER
SAW - DUST
SOAPS



FUMIGATORS
INHALERS

DRESSINGS
DISINFECTORS

KINGZETTS (Patent) SULPHUR FUMIGATING CANDLES.

its failings, has throughout this litigation been on the side of right and honesty, and not even the great powers and casuistry of Mr. Fletcher Moulton, Q.C., could blind the eyes of the judges to the real facts. Lord Herchell's plain question, "Why do you call your sauce 'Yorkshire Relish' at all? Why not call it 'Birmingham Relish'?" touched the spot, and Mr. Moulton's answer, "Because it is substantially Yorkshire Relish," elicited the remark from Lord Shand, "There is no proof of that in your evidence, 'Yorkshire Relish' being a name attached to the respondent's particular manufacture, which, by-the-bye, is made in Yorkshire."

That is exactly the case. The only object in calling the substitute Yorkshire Relish was to "jump another man's claim" and appropriate the result of another's industry, business acumen, and expensive advertising. Were our courts to sanction such an action it would be tantamount to sanctioning the right of any competitor of Mr. Powell (trading as Messrs. Goodall, Backhouse, and Co.), to put his hand into that gentleman's pocket and filch his purse. The cases are really on all fours, and as Mr. Powell in this action has fought, at enormous cost and trouble, a battle which has resulted in giving assured protection to owners of proprietary articles, he has well deserved the thanks of the whole of his fellow-traders.

A PROFESSOR OF AGRICULTURE AND HIS KNOWLEDGE OF MILK.

It is a great many years since Lord Brougham said the schoolmaster was abroad, and many of our estimable contemporaries—the *Mark Lane Express*, *Farmers' Gazette*, *Farm and Home*, etc.—have noted with satisfaction his growing importance as a Professor of Agriculture, and hoped for great things from his existence. We do not know what Mr. J. P. Sheldon's knowledge of agriculture may be in other branches than dairy farming, but if it is on a par with his knowledge of milk it is a species of very dangerous and wholly indefensible ignorance. On page 328 we record a milk prosecution at Leek, on June 30, before Messrs. J. Robinson, H. Sleigh, A. Ward, J. P. Sheldon (Professor of Agriculture), and Major-General Phillips. The farmer's milk had been sampled and analysed on four occasions, and the results were as follows:—

| | May 26. | June 5. | June 5. | June 28. |
|---------------------|---------|---------|---------|----------|
| Solids not fat..... | 8.64 | 8.80 | 8.91 | 9.09 |
| Fat | 2.29 | 2.40 | 2.32 | 3.50 |

Total solids.....10.93 11.20 11.23 12.59
 The sample analysed on June 28 was taken after

notice was given to the defendant that sampling would take place.

If a professor of agriculture knows anything about his "profession," he, at least, ought to know that the average of fat in the milk of mixed herds is not 2.29, or 2.40, or 2.32, but is at least 3.6, as proved by 226,009 samples analysed for the Aylesbury Dairy Company by Vieth and Richmond, and given in evidence before the late Committee on Adulteration.

The samples of milk taken for analysis in Staffordshire last quarter averaged over 3.50 per cent. of fat. In this case the defendant owned up that he made butter, and even a professor of agriculture ought to know enough about milk to understand that if defendant always had about one-third of the milk over what was delivered to the paupers, and the article sent for the paupers use had only 2.29 to 2.40 per cent. of fat, whilst a sample analysed after notice had been given yielded 3.50 per cent. of fat, the milk could not have been genuine.

On public grounds such decisions as this are decidedly injurious to the community. Milk is the main food of infants, and the aim of all interested in justice and the public welfare should be to maintain its standard of quality, and not even the fact that it was workhouse milk can justify such a decision as this at Leek. Somerset House is bad enough with its 2.75 per cent. fat standard, but if this be the best our professors of agriculture can do, the sooner we have persons appointed to educate our professors the better for the public.

A SIDE-LIGHT ON THE LONDON MILK PROBLEM.

A CASE which was heard in the Clerkenwell County Court on June 25, when William Richards, of 1, Crossley-street, Liverpool-road, sued the Express Dairy Company for a fortnight's wages in lieu of notice.

Plaintiff said he had been manager of the Hart-st. (Bloomsbury) branch, and was dismissed because he was charged with a series of frauds, but he was quite innocent.

In cross-examination by Mr. Ricketts, for the defendant company, plaintiff admitted that the carriers usually got served out a smaller quantity of milk than they were supposed to have, because some of the milk had to be kept back for mixing with the cream and supplying the wants of the manager's family. He had to keep back about 20 quarts of milk daily to supply the deficiency, and the carriers were deprived of it.

Mr. Ricketts: That is to say you robbed the carriers and the carriers robbed the customers?

Plaintiff: Of course, someone suffered.

Ed. Hodgson, the manager of Hart-street branch of the defendant company, said the plaint was as absurd as it was false. The fact was that when the cream was put into ice there was a shrinkage, and to make up this, a certain quantity of milk was used. In explanation of the allegations made against the plaintiff as to fraud, he said that the plaintiff used to be in collusion with a certain number of the carriers who received in excess of their quantity, while others received short measure. The quantity in excess would be sold by the confederates, who would meet the foreman after dark and divide the spoils between them. On one occasion witness found a carrier with a churn which contained 16 quarts more than it ought to have done.

Other evidence showed that the plaintiff had been seen to receive money from a carrier in a public-house in Southampton-row.

His Honour said that if the company found that the servants were detected tampering with the milk they were justified in dismissing them, and he was afraid that the plaintiff had misconducted himself on many occasions. Judgment for the defendant with costs.

AN ASTONISHING VERDICT.

AT the Leek Petty Sessions, Edwin Brough, farming his own estate at Thorncliffe, was charged with being in possession of a certain article of food, to wit, a quantity of milk from which the cream had been extracted, so as to render the milk inferior to the proper standard. There were three charges. Mr. E. Paine, of Hanley, appeared for the defendant in the first two, and Mr. T. H. Bishton in the third. All the charges, however, were of a similar character. Mr. Knight, inspector under the Food and Drugs Act, was the prosecutor.—In making the charge, he said the defendant was the contractor to supply pure milk to the Leek Union Workhouse. The contract, and that would be admitted, was to supply pure milk, and the charge was that defendant had deprived the milk of a portion of its fat. The samples which had been analysed, and on which the charges were based, had been procured from defendant when he was delivering milk to the workhouse.—William Giffard, an assistant inspector, said that at about 8.30 a.m. on the morning of May 25, he purchased a pennyworth of milk from the defendant whilst he was in the act of delivering the milk to the workhouse. He gave the defendant due notice that the milk was to be analysed. On the evening of June 3 he purchased another pennyworth from defendant at the same place, and on June 4 he purchased a third pennyworth, and again told him what was to be done with the milk.

The next witness was Edward William Jones, public analyst to the County of Stafford, who said that he had analysed all the three samples, which had been promptly sent to him by Mr. Knight. On the first sample the analysis showed that 23 per cent. of the cream had been extracted, showing solids not fat, 8.64 per cent.; fat, 2.29 per cent.; water, 89.07. The second sample showed that 20 per cent. of cream had been extracted; solids not fat, 8.80; fat, 2.40; water, 88.80. The third showed that 23 per cent. of the cream had been extracted, the analysis showing solids not fat, 8.91 per cent.; fat, 2.32; water, 88.77. Continuing, Mr. Jones said that the analysis had been worked on the very lowest basis as regarded the standard of milk which could be called pure. The standard was only 3.0 per cent. of fat, whilst taking the average, of samples analysed throughout the county during the last quarter, had been nearly 4 per cent.

Mr. Bishton here cross-examined Mr. Jones. He could not understand the figures given by the witness.

Mr. Paine and Mr. Bishton addressed the Bench. In the course of their remarks they said that their client was a most respectable man, farming his own estate, and generally respected and esteemed by his fellow farmers and neighbours. They thought they could bring such proofs as would satisfy the Bench that, notwithstanding what the analyst had seen, the defendant was not guilty of the offence with which he had been charged. The fact of the matter was that the milk had been got from aged cows, and everyone knew that whilst an aged cow when dieted for the purpose produced about twice as much milk in bulk as a young cow, but at the same time the milk from the old cow could not be compared for purity with that of a young animal. Their contention was that the analysis, as handed in, might be correct, and at the same time the milk could be just as taken from the cows.

Defendant said when the first sample was taken he milked nine cows, aged varying from 10 to 16 years. On that day the milk was put into the refrigerator, where it remained about 10 minutes. The milk was then placed into cans, which were as dry and as clean as possible. On an average each of the cows would yield from 10 to 12 quarts each meal, and, speaking from experience, he could get about twice as much milk from an aged as from a young cow, but the quality would not be the same. He was sure that no one

tampered with the milk or added water, as he did not lose sight of it all the time from when it was milked by himself, his sister, and a boy, until he delivered it to the workhouse. Exactly the same routine was gone through on both the other occasions, when samples were purchased from him. He supplied 60 quarts to the workhouse each day. In the case of cross-examination by Mr. Knight, he stated that in the week ending May 25 they were not making butter.

Mr. Knight: Do you remember seeing a policeman on June 25?—Yes.

Mr. Knight: Did he tell you that the sub-inspector was going to take another sample of milk on the following day?—I knew he was about; I had been told before.

Mr. Knight: What time do you deliver the milk at the workhouse?—8 to 8.30 morning and 6 to 6.30 night.

Mr. Knight: How was it that you delivered the milk at 7 a.m. on June 26?—I had other business to do.

Mr. Knight: Do you know that there was a sample taken on the 26th?—Yes.

Mr. Knight: Were you milking the same old cows on June 25 as you were on May 25?—Yes.

Mr. Knight: Should you be surprised to hear that the sample taken on June 26 was *pure*, and contained 3.5 per cent. of fat?—(No answer.)

Mr. Knight: How do you account for the sudden rise from about 2 per cent. of fat on June 4 to 3.5 per cent. on the 26th. (No answer.)

Mr. Knight: Come. You knew the sample was going to be taken, can't you *account* for the difference. You say you were milking the same cows. (No answer.)

Sarah Brough, sister of the defendant, corroborated his statement with the exception that she could not say for certain whether or not they were making butter at the time, as sometimes they made it and sometimes they did not.

George Hand, farmer, of Fleet Green, spoke as to the respectability of the defendant, and said that from his experience he was sure that the milk produced by aged cows such as defendant had his place stocked with would be very poor. He was surprised to see such aged stock on Mr. Brough's farm.

John Critchlow, of the Easing Farm, Thorncliffe, gave similar evidence.

Wm. Brough, brother of the defendant, gave evidence for him. He said that his brother had contracted to supply pure milk to the workhouse, and pure milk had been supplied. He had not agreed to supply a given percentage of fat or cream.

The inspector said they had another sample analysed on June 25 which was perfectly satisfactory.

The defence made an offer that they would pay the expenses of the analyst going to the farm and seeing the cows milked, and then analyse.

The inspector said, as he had remarked, this had already been done.

After the Bench had deliberated for some time, the Chairman said that all the cases would be dismissed, but inasmuch as the quality of the milk had been affected by the action of the seller of the milk, both parties would have to pay their own costs.

MUSTARD.

At Chesterfield, Eliza Graley, of New Whittington, was summoned for selling to Robert Tomlinson, to the prejudice of Francis Shortt, Inspector under the Food and Drugs Act, at New Whittington, on May 12, mustard containing 5 per cent. of wheat starch, and not of the nature, etc., demanded.—Tomlinson said on the date named he bought a quarter of a pound of mustard, for which he paid 5d., a high price to give.—Colonel Shortt produced the analyst's certificate.—She pleaded ignorance, stating that she had only been two months in

business. She bought it believing it to be good mustard, as it was labelled to be.—Colonel Shortt said if the defendant could produce the tin, if it was labelled as stated, he would withdraw the summons and proceed against the merchant.—The Chairman: It is a shame she should suffer if she has been imposed upon.—Adjourned for a week.

PARAFFIN WAX IN SWEETS.

HANNAH HALL, confectioner, Buxton, was fined a guinea, on June 26, at Buxton, for selling chocolate cigars containing paraffin wax. Colonel Shortt said it was injurious to the health of children. A case had been known where a child had died. The county analyst said the melting point of wax was 122, and the normal heat of the body was 98.4. It was absolutely indigestible, and would cause obstruction or inflammation. The sweets it was stated were manufactured at Salford.

EXCESS WATER IN BUTTER.

At Ripley Petty Sessions, Arthur Bacon, of Horsley Woodhouse, was charged with selling half-a-pound of butter which was not of the nature, quality, and substance demanded by the purchaser, at Horsley Woodhouse, on April 1. Mr. F. Searby, of Ilkeston, prosecuted, and called Captain Sandys, Inspector under the Adulteration Act, who deposed that on the day named he purchased half-a-pound of butter from the defendant, for which he gave 7½d. He sent a sample of it to the county analyst, whose certificate stated that it contained nineteen parts of water, being three in excess of that generally allowed. Mr. John White, F.I.C., Derby, deposed that he had analysed the sample of butter sent to him, and found that it contained nineteen per cent. of water. He had been instructed to pass all samples of butter which contained no more than sixteen per cent. of water, but to prosecute all above. Defendant was fined £1 5s. including costs.

SKIMMED CONDENSED MILK AND AN INQUEST.

At the City Coroner's Court, Liverpool, on June 26, before Mr. T. E. Sampson, an inquest was held on a child who had died from malnutrition. It was stated that the child had been fed on condensed milk, the mother being dead and the family being very poor. Dr. Gordon, who deposed the cause of death, said condensed milk was insufficient nourishment for a child, although in some instances it was fairly efficacious. The doctor added that there were various brands of condensed milk in the market, and their nutritive power varied. It was observed that some of the cheaper brands were very weak in quality, and people should understand that that milk was insufficient as a nourishment for children. The coroner agreed that the public should be made aware of this fact.

SALAD OIL.

THOMAS SAWYER, oil and colourman, of 118, Canterbury-road, Kilburn, answered a summons at Harlesden on June 24 for selling as salad oil containing 100 per cent. of mineral lubricating oil.—An old gentleman named Robertson deposed to going to the shop and saying to the manager:—"I want a pen'orth of your best salad oil." He was served, and he took it home, where his wife and family, with grandchildren, numbered twelve. The oil was poured on the salad, used at supper, and the next morning everyone but himself felt ill. He did not take salad himself.

(Laughter.) Those who went to work soon came home again, and the whole twelve were vomiting and feeling very ill. His wife said, "A nice thing you've done—poisoned us all with that oil."—Robert Watts, one of the Middlesex County Council Food and Drug inspectors, deposed to the above coming to his knowledge. He wrote on a piece of crumpled dirty paper a request to be supplied with "half a pint of salad oil." He then dressed up his little boy in some old clothing and sent him to the shop with an old bottle. The defendant's manager took 6d., and witness followed into the shop with his assistant as the oil was handed to the boy. He gave the usual caution, divided the oil, etc., and defendant's manager said he used the oil on salad himself. Witness produced the analyst's certificate showing that the oil was all mineral lubricating oil and injurious to health. This shop was in a very poor neighbourhood.—The boy and the assistant gave corroborative evidence.—The defence was that Sawyer, who has 15 shops, took all possible care to supply the purest articles, and in this instance the manager purchased and sold this oil, which was admitted to be ordinary "sweet" or "hair-oil," without his knowledge.—The manager, who declared that Watts' boy pretended to be deaf and dumb, was informed by him that it was "sweet" oil.—Mr. Bird said it was a very serious case, and imposed a fine of £5 and costs.

SPIRITS.

At Newbold Moor, William Fox Pearson was summoned that he, by the hand of Mabel Jones, did sell to Joseph Hewitt, at Newbold Moor, on May 11, whiskey, the alcoholic strength of which was 31 per cent., and at which, at 25 per cent., 8 per cent. of water had been added.—Mr. J. Hewitt, county inspector, said on May 11 he went to the Queen's Hotel, Newbold Moor, and asked for half a pint of Irish whiskey, which was served to him by the servant of Pearson, Mabel Jones. He paid for it, and then made the usual declaration, and divided the whiskey, one part of which defendant retained, one part being sent to the public analyst, and the third he produced. No intimation was given of the spirits being a mixture. The analyst deposed that it was under proof.—Defendant's wife said they always got the best whiskey, and had always added the same amount of water to it.—The Chairman: I suppose you did it in the cause of temperance; you thought it would be better for them to have more water. (Laughter).—Defendant: Oh, no.—A fine of 5s. and costs was inflicted.

At Frome, on June 24, George Burnett, landlord of the Woolpack Inn, Culverhill, Frome, was summoned for selling adulterated whiskey, and was fined 5s. and costs.

At Steyning Petty Sessions, George Joseph Welch, was summoned at the instance of the police for selling, through his agent, a barmaid, adulterated whiskey, at the Cottage Inn, New Shoreham.—Mr. Nye appeared for defendant and pleaded guilty.—P.C. Scutt and P.S. Goldring gave formal evidence, and Superintendent Hooker produced the certificate of the Public Analyst, which showed 2 per cent. under the legal proof.—The magistrates said they were willing to regard it as an oversight, but told the defendant that it was his duty to avoid sins of omission as well as commission.—Defendant was fined £1 and 11s. costs.

At Sleaford, on June 28, Charles E. Cox, of Sleaford, was summoned under Section 6 of the Adulteration of Food and Drugs Act, for selling whiskey which contained 26.67 per cent. of added water.—Superintendent Taylor purchased the whiskey from defendant himself, and the facts were not in dispute.—Mr. E. H. Godson, who appeared for the defence, quoted a recent decision of Justices Day and Lawrance, in the appeal case of

Smith v. Jeffrey, in which instance the whiskey was 35 per cent. under proof, but evidence was called to prove that whiskey would deteriorate by evaporation, as well as by adding water.—The defendant in the Sleaford case swore that he had had the whiskey a considerable time, and that he had added no water to it. It was admitted that when the whiskey was delivered to him it was 22 degrees under proof, 25 being the limit allowed by law.—The magistrates dismissed the case on the ground that the strength of the whiskey might have evaporated.

At Chichester, on June 19, George Henry Norris, the landlord of the Berkeley Arms, Bognor, was summoned for selling Irish whiskey diluted with water to 35.7 under proof, being 12½ per cent. below the lowest legal strength. It was explained that defendant, in the absence of his wife and the barmaid, inadvertently served the police with whiskey from a decanter which his wife kept for private use.—The Bench said that sufficient care had not been exercised, and fined the defendant 40s. and costs.

GLYCERINE.

JOHN GEORGE TODD was summoned under the Food and Drugs Act for selling glycerine, which was adulterated to the extent of 18.57 per cent. with glucose.—Mr. B. Scott Elder, chief inspector for the county of Durham, said this was the first case, not only in the county of Durham, but in the North of England, where a case of this nature had been brought into court. Glucose was a substance derived from starch, and altogether dissimilar from glycerine, and could not possibly enter into the composition of glycerine at all. There was no doubt it had been added for the purpose of adulteration, and there was nearly 20 per cent. of it. Glucose sold at 7s. a hundredweight, whereas glycerine cost twelve times as much, and he thought that was the secret of the adulteration.—Mr. Elder afterwards proved the purchase of some glycerine at defendant's shop, on May 20, in six small bottles and having it analysed. The county analyst certified that glucose was not a natural constituent of glycerine.—Defendant said the bottles were labelled pure, and he sold them as he got them without tampering with them in any way, and they put no less price than before on it.—Mr. Scott Elder pointed out that by law the retailer could recover the costs of prosecution in respect of the purchase of articles from the wholesale dealer, and also damages.—Defendant said he might recover some of the costs, but not all.—Fined 10s. and costs.

DRUGS.

At Derby, Eliza Mann, grocer, of Long Eaton, was summoned for selling to Joseph Hewitt tincture of rhubarb deficient of 20 per cent. of proof spirit, 60 per cent. of its solid ingredients, and also devoid of saffron, at Long Eaton, on April 30.—Captain Sandys, inspector under the Food and Drugs Act, appeared to prosecute, and called Joseph Hewitt, County Sanitary Inspector, who said that he went to the defendant's shop on the day in question, and bought 6 ozs. of tincture of rhubarb, and gave 1s. 8d. for it. He divided it into three portions, and gave the defendant one part, the public analyst another, and kept the third.—Captain Sandys produced the certificate from the public analyst, which showed that the tincture of rhubarb was deficient as above stated. Defendant said she had had the drug for a considerable time, and did not know she was doing wrong.—The Bench imposed a fine of 2s. 6d. and costs, in all 21s.

At Clay Cross, on June 23, Margaret Foster, of Eldon-street, was summoned by Colonel Shortt, for

selling $3\frac{1}{2}$ ozs. of tincture of rhubarb, which was found to be adulterated, at Clay Cross, on May 18.—Colonel Shortt said this was a case in which a drug was sold to a purchaser, which was not the substance and the quality demanded. It was deficient of 20 per cent. of proof spirits, and 15 per cent. of solid ingredients. It might be said that it was in consequence of the duration of keeping the drug in the shop that it was deficient in its quality, but it might be in consequence of the addition of water.—William Marples, an assistant to Colonel Shortt, proved purchasing the tincture of rhubarb.—Mr. John White, the county analyst, submitted his report of the analysis, and remarked that keeping for a length of time the drug in the shop would not decrease the strength or the quality of the drug.—The defendant, who was represented by her assistant, was fined 5s., which with the costs came to £1 3s. 6d.

A YEAR'S ANALYSES IN BOMBAY.

THE annual report of Surgeon-Captain Collis Barry, Chemical Analyser to the Bombay Government, shows that during 1896 his department undertook an unusually large amount of work. The gross total of articles analysed was 3,222, being an increase of 172 as compared with the previous year, mainly owing to the larger number of customs samples examined. There were 323 medico-legal cases investigated. Of these 148 cases related to suspected human poisoning, and the analysis showed traces of poison in 48 instances. Arsenic was, as usual, the poison most frequently employed, though in several cases opium was used. One case of attempted poisoning by pounded glass came under the notice of the Department. A Poona woman pounded up her bangles, and introduced the powder into her husband's bread. Tiny fragments of green and pink glass were discovered in the bread. The number of cases of suspected animal poisoning was 116, and the presence of poison was detected in 57 instances, arsenic again being the favourite agent of destruction. Out of 409 samples of water forwarded for examination, no fewer than 192 were classed as bad. In the samples of various articles examined for customs and abkari purposes, the Department again discovered, as in 1895, that many attempts were being made to import feebly methylated spirit and to substitute it in medicine for the more costly rectified spirit. When it became known that the Customs' authorities were prepared to allow the addition of wood naphtha to spirit insufficiently methylated, ingenious importers discovered a new method of obtaining weakly methylated spirit. They tendered wood naphtha for such additional methylation as might be required, but of such a weak character that very little extra methylation would thus be effected. Measures were taken to thwart this amiable device. The miscellaneous imports tested under the Merchandise Marks Act reached the unprecedentedly high total of 230 samples, for which 2,500 analyses, many of them extremely tedious, were necessary. It does not speak well for the present standard of commercial morality that "the very large number of samples in which adulteration was detected during the past year testified to the continued attempts at sophistication practised by the exporters, which, in many cases examined, were so ingeniously concealed as almost to defy detection by the ordinary methods of analysis." Adulteration is chiefly rife among paints and colours, and of 63 mineral paints analysed 40 specimens were found to contain improper ingredients. One-third of the samples of oils examined were also adulterated in various ways.

At Knaresborough market, on Wednesday, farmers' butter was sold wholesale at 8d. per roll of 24oz., or a trifle under 5½d. per lb.

THE YORKSHIRE RELISH APPEAL CASE.

IN the House of Lords, on Tuesday, July 6, 1897, before the Lord Chancellor (Lord Halsbury), Lord Watson, Lord Herschell, Lord Shand, and Lord Davey, the case of *Powell v. The Birmingham Vinegar Brewery Co., Limited*, was decided.

Counsel for the Appellants (The Birmingham Vinegar Brewery Co., Limited): Mr. Moulton, Q.C.; Mr. Buckley, Q.C.; and Mr. Waggott (instructed by Messrs. Thorogood and Co., agents for Messrs. Cooper, of Newcastle).

Counsel for the Respondent (Wm. Powell, trading as Goodall, Backhouse and Co.) Mr. Graham Hastings, Q.C.; Mr. John Cutler, Q.C.; and Mr. Hampson (instructed by Mr. J. Seymour Salaman).

JUDGMENT.

The Lord Chancellor: This case appears to have occupied seven or eight days at the original trial. How long it occupied in the Court of Appeal I do not remember. It has now lasted into the third day of argument before your lordships.

It appears to me that the proposition involved is of a very simple character, susceptible, I think, of a very simple answer. The proposition is one which I think the highest judicial authority has accepted and acted upon for a great number of years, and it is that Lord Justice Turner who says in terms: "No man can have any right to represent his goods as the goods of another person." In an application of this kind it must be made out that the defendant is selling his own goods as the goods of another. That is the only question of law which appears to me can arise in these cases. All the rest are questions of fact. The most obvious way in which a man would be infringing the rule laid down by Lord Justice Turner is if he were to say in terms: "These are the goods manufactured by the rival tradesmen, and it seems to be assumed that unless he says something equivalent to that no action will lie. It appears to me that that is an entire illusion. By the course of trade, by the existence and technology of trade, and by the mode in which things are sold, a man may utter that proposition, but in different words and without using the name of the rival tradesman at all. A familiar example, of course, is when, without using any name, by the identity of the form of the bottle, or the form of the label, or the nature of the thing sold, in the package, he is, not in express words, but in something that he knows to be understood by the public, making a statement in the form of those different modes by which the statement can be made, and in each case it comes to be a question whether or not there is the statement made, and if the statement is made, there can be no doubt if the legal conclusion that he must be restrained from representing that the goods that he makes are the goods of the rival tradesman. Then you get back to the proposition that I have read from Lord Justice Turner.

Now, my Lords, in this case we have a singular course of argument adopted. This gentleman who is complaining before your Lordships has invented a sauce which he calls by the name "Yorkshire Relish." He has invented it, and he has carried on the business of selling it for a great number of years. It is not denied that under that name it has a reputation in the market which has made it a popular thing, and that people buy it freely.

Then it is said, as a first proposition of fact, that there is no representation that this is the manufacture of the original inventor by calling it "Yorkshire Relish," because it has become a well-known commercial article, and calling it by that name means that it is that thing. We have had a very long argument on the subject, but the first proposition which could be advanced against that argument is, that it is not true. As a matter of fact, this is not the well-known article. The composition of the

well-known commercial article is a secret. The exclusive manufacture of it is by the person who knows the secret, and nobody else can manufacture it because they do not know how it is made.

It is obvious, therefore, that the first proposition of fact which is supposed to encounter the plaintiff's right, is displaced by the existing state of the evidence. As to that there really is no conflict in the evidence in this case. The question of whether or not it is identical has been, I will not say, darkened, but, as a matter of fact, we have had a long disquisition as to the difficulties of knowing what exactly is thought in the mind of a purchaser when he purchases a bottle of this Yorkshire Relish. But without going into that interesting discussion, it is obviously true that the thing that is bought does not simply consist of something or another which has a particular taste. Its reputation may depend upon whether (as I think it has been suggested more than once in the course of the argument) it is wholesome and whether it assimilates well with the digestion and so on.

Without going through all these things, the thing that the person who buys it desires to have is Yorkshire Relish.

Now, the thing that is sold as Yorkshire Relish is not Relish—that is, in the sense of its being the same chemical composition, in the sense of its being the same taste, in the sense of its being so properly assimilated to the taste of the persons—either in smell or taste—as the original composition. If that is so, how can it possibly be contended as a matter of fact that a person who is selling this thing as Yorkshire Relish is entitled to do it because it is a well-known commercial article, and because he is only selling a well-known commercial article by the only name by which it is known. I have had myself very great difficulty in following the line of reasoning upon that part of the case which has been suggested to your Lordships. It is enough for me to say in respect of the particular facts here, which are suggested to be in conflict, that there is no real conflict at all. To my mind, answering the question of fact, as learned Judges who have dealt with this question before have answered it, I am satisfied that a person who puts forward this Yorkshire Relish made as it is by the present defendants, is representing a particular manufacture. It may be true that the customer does not know or care who the manufacturer is, but it is the manufacture that he desires. He wants Yorkshire Relish to which he has been accustomed, and which it is not denied has been made exclusively by the plaintiffs for a great number of years. This thing which is put into the hands of the intended customer is not Yorkshire Relish in that sense. It is not the original manufacture. It is not made by the person who invented it. Under these circumstances it is a fraud upon the person who purchases to give him the one thing in place of the other.

But then it is said that may give the purchaser a right to bring an action, but the present plaintiff has no right to intervene in the transaction between the parties. All I can say is that that is a proposition which probably might have been established, if it were true, in every one of the cases, and I never heard of such a case before. On the contrary, the rule of law has been that if you choose to state that which is false, and induce another person to deal with you by that falsehood, and so deprive the real person of the trade which otherwise he would get, that is an actionable wrong, and that gives rise to the right to an injunction.

I protest against going through all this evidence and going through all these different hypotheses of what might or might not happen in a case of this sort when the very simple proposition is established, to my mind conclusively, by the evidence here that in this particular case there is the representation that it is made by the rival manufacturer, when in fact it is not, and that the thing is that which it purports to be is not, and that the effect of that is to deprive the plaintiff of some

trade that otherwise he would get. Those three propositions being established as a matter of fact, I decline to go into all the questions which might arise upon another condition of facts in order to consider what would be the law applicable to them if that condition of facts did not exist.

I therefore do somewhat deprecate the enormous, inordinate, and unreasonable length to which this case has been protracted when, as I say, it appears to me that the proposition is a very plain one, and the facts not really in dispute establishing the proposition beyond all reasonable doubt.

My Lords, I move that this Appeal be dismissed with costs.

Lord Watson: My Lords, I am of the same opinion. The argument in this case, as is too common of cases of a similar class, has been exceedingly discursive. The only point of law involved in the case appears to me to be this, that the appellants have no right to sell the sauce which they manufacture as the goods of the respondent. This is a proposition which does not appear to me in the circumstances of the present case to admit of any serious dispute, and I can hardly say that it has been seriously disputed. That being so, the only question to be disposed of in the case is a question of fact; have the appellants so sold their goods in the market as to represent them as being the goods of the respondents? Upon that question the learned judge who tried the case, and three learned Lords Justices of the Court of Appeal have been unanimous in returning an affirmative answer. I should certainly, without good and strong cause, hesitate greatly to differ from the concurrent judgment of those two tribunals upon a matter of fact; but I am relieved from the necessity of doing so, as I am bound to say that those portions of the evidence which were brought under our notice by the counsel for the appellants, appear to me to strengthen and confirm the conclusions which the learned judges have arrived at.

Lord Herschell: My Lords, I am of the same opinion. I shall add very few words only.

I think that the fallacy of the appellants' argument rests upon this; that it is assumed that one trader cannot pass off his goods as the manufacture of another unless it be shewn that the persons purchasing the goods know of the manufacturer by name and have in their minds when they purchase that they are made by a particular individual. It seems to me that one man may quite well pass off his goods as the goods of another if he passes them off to people who will accept them as the manufacture of another, though they know that other not by name at all. In the present case it seems to me that Yorkshire Relish meant the manufacture of a particular person. I do not mean that in the minds of the public the name of the manufacturer was identified, but that it meant the particular manufacture, and that when a person sold the Yorkshire Relish as the defendants did, by selling it as Yorkshire Relish and calling it Yorkshire Relish, they represented to the public that it was that manufacture which was known by the name of Yorkshire Relish.

It is said on behalf of the appellants that they have a right to sell what they manufacture and call it Yorkshire Relish, because Yorkshire Relish had come to be merely the name of a particular sauce with a particular flavour. I do not think that is an answer which, in point of fact, can be set up in the present case. I do not enter upon the question of whether it would have been sufficient in point of law if it had been established in point of fact, but here what they sell and put on the market is not Yorkshire Relish in the sense in which those words have been used down to that time, and would be understood by everybody. It may have been a sauce "very like." It may have been a "good match," or something very near it, whatever you please, but it was not Yorkshire Relish. When they sold their

goods as Yorkshire Relish they sold them as the plaintiff's manufacture when they were not the plaintiff's manufacture, nor the article which he manufactured and sold under that name.

I am of opinion that the judgment should be affirmed.

Lord Shand: My Lords, I agree in thinking that this case really raises no question of law. The law, I think, has been admitted on the part of the defendant to be beyond question: That no trader is entitled to pass off his goods as the goods of another and so acquire profits to which that other would be entitled. In the present case in two Courts it has been held as a matter of fact by every judge who has considered the case, that the defendants have, in point of fact, been passing off goods manufactured by them as the goods of the plaintiff; and I concur, having heard a great deal of the evidence read, in that opinion.

The plaintiffs prior to the proceedings of the defendants had established an important business in an article of manufacture which they called Yorkshire Relish. It is true, I think, upon the evidence which Mr. Buckley has read before us fully to-day, that very few of the public knew who were the makers of this sauce, but the relish or sauce itself had acquired a great reputation and commanded a large sale; and, what is most material in the decision of this case, the profits of this sale were acquired entirely by the plaintiffs. The result was that when a purchaser came into the market and asked for Yorkshire Relish, however little he knew the name of the maker of the article, the result of the purchase was that the plaintiffs got the benefit of it; and it appears to me in those circumstances the defendants were not entitled by using the same name for the article to appropriate those profits.

The first objection to the proceedings of the defendants is that in point of fact they called the article manufactured by them Yorkshire Relish; when in point of fact it was not that article at all as the article of commerce that had been known in the market, and I think the plaintiffs had a right of action to put a stop to an article, which could not possibly or reasonably be called Yorkshire Relish, being sold under that name as detrimental to them, and injurious to them as depriving them of a source of profit.

But then, in addition to that, it humbly appears to me that there really was *de facto* a representation here that the goods sold by the defendants were the goods of the plaintiff. As has been observed by his Lordship on the Woolsack, representation may be of a very varied character. It may be made directly by a positive assertion that "These are the goods of the plaintiff," or it may be made indirectly in other ways. It may be made by means of labels, of marks, of forms of bottles, and in numerous other ways by proceedings which are calculated to deceive the public. In this case I think it has not been made out that there was a direct representation or that there were such representations by means of the labels, because I rather have felt that the arguments of Mr. Moulton and Mr. Buckley that these labels were quite of a different kind to distinguish the article was a sound argument.

But there remains the fact that this article was called by the name of Yorkshire Relish, and in this particular case, whatever may be said of others, it occurs to me that the mere use of the words Yorkshire Relish was a representation that those were the goods manufactured by the plaintiffs, for this reason, that the plaintiffs had given that name to their goods, they exclusively had made goods of that class, and the public had bought those goods to an extent which had given the plaintiffs very large profits.

Cases will no doubt differ in this respect; one can imagine other goods called by various names in which the mere adoption of the name would not have the effect of injuring the plaintiffs; but the words "Yorkshire Relish" here is not a descriptive name. It is

what may be called a fancy name in its outset, and it appears to me to remain the same still.

It is not such a case as was put in the course of the argument of a person giving a mere description of the article he makes by describing the materials from which it is made—wholemeal bread, or the like. A trader who sells wholemeal bread could never complain of another coming forward and using the same term and selling bread under the name of "wholemeal bread," but when Yorkshire Relish is given, not as a description of the article, but as something that would enable the persons to identify the article as of the same manufacture as they had before, the very use of the term "Yorkshire Relish" appears to me to be a representation that the article sold is the article which the plaintiffs make, and, therefore, on that ground, as well as upon the ground that this is really not Yorkshire Relish at all as it was made by the plaintiffs, I am of opinion that the judgments of the Court below are sound and ought to be affirmed.

Lord Davey: When once the facts of this case are fully grasped it does not appear to me to present any great difficulties for our decision. The plaintiff, the respondent to this appeal, has a secret recipe for making a sauce or relish which he and his predecessors in trade have sold for 34 years under the name of Yorkshire Relish. The appellants' contention is, if I understand it rightly, that the respondents have no monopoly of the manufacture, and all the world may manufacture their goods if they can, and if they succeed in manufacturing their goods they are entitled to call them by the only name by which those goods can be described. Now, my Lords, the appellants' argument, as I have described it (I do not think it necessary to say anything as to the legal validity of it) fails in fact. The appellant does not pretend that he has discovered the respondent's secret or that his goods are made according to the same recipe, but what he says is that they are substantially the same as the respondent's goods, or identical in use, or a wonderful image, or other expressions are used indicating close similarity between the two sauces. He does not pretend that the appellant's sauce is made of the same compounds or made in the same way, although it is said it produces the same result. The appellants therefore are misrepresenting the real character of their goods when they call them Yorkshire Relish. They are not, in fact, Yorkshire Relish, though I will admit they closely resemble that compound. If this be so, your lordships are relieved from the consideration of what would be the right of the appellants if they were in fact selling the same goods as the respondents, and I do not find it necessary or desirable to express any concluded opinion upon that question.

I will only say that as at present advised I see no reason to differ from the opinion expressed by Mr. Justice Fry in the Angostura Bitters case, or that expressed by Lord Justice Lindley in the course of his judgment in the present case, in which his lordship says: "Again if a person makes an article not patented and gives it a certain name by which the article comes to be known in the market, anyone who can make the same kind of article can call it by the name by which it is known if he can, in fact, do so without passing his goods off for those of the original maker." So long as the respondent can succeed in keeping his secret he is in fact the sole manufacturer of Yorkshire Relish in the market, and the appellant's act of selling his goods as Yorkshire Relish when they are not Yorkshire Relish in fact is at once a fraud upon the public and at the same time amounts, in my opinion, to a representation that the goods are goods of which the respondent is the sole manufacturer.

In my opinion, my Lords, the case is correctly summed up by Lord Justice Kay in words which I will take the liberty of reading: "The defendants made a sauce which it is said closely resembles that of the

plaintiff's in appearance, in chemical ingredients, and in flavour, and it is described by one of the chemical experts who have given evidence as a 'wonderful match.' But as the defendants do not know the recipe of the plaintiff, nor the manner in which the ingredients are compounded, it is impossible to say that the two sauces are the same. The defendants are therefore selling a different sauce by a name which, by itself, would be calculated to induce purchasers to believe that it is the plaintiff's sauce." That, my Lords, seems to me the whole of the case, and I entirely concur in the judgment which has been proposed.

UN SOUND FOOD.

AT Eastbourne, Henry Brookshaw, fish salesman, was summoned for having exposed for sale at his premises, 335, Seaside, fourteen dabs that were unfit for food.—Mr. Wintle was for the defence.—Sanitary-inspector Mitchener said he went to the defendant's shop about 11.30 a.m. Entering a shed at the rear of the shop where the fish was prepared he saw lying on the bench a quantity of fish. By the side of the fish were two baskets full of pieces of fish, cut up ready for frying. Examining these he found them good, but fourteen of the fish on the bench—dabs—were, in his opinion, unsound. Two other dabs with them were good. The whole of the fish had been cleaned. Whilst he was examining the fish Mrs. Brookshaw came into the shed and a conversation passed between them. There was an offal tin at the rear of the premises; this was about half filled with unsound fish and offal. He seized the 14 dabs before referred to, and they were subsequently examined by the Medical Officer of Health and a Justice of the Peace, by both of whom they were condemned.—The Town Clerk proposed to question the witness as to the conversation with Mrs. Brookshaw, but the Bench, acting upon the advice of their Clerk (Mr. E. O. Langham), declined to admit this as evidence against the defendant.—In cross-examination, witness said Mrs. Brookshaw told him the fish had come there on the previous day from the railway station.—Mr. Wintle, on behalf of the defendant, denied that the fish seized by the Inspector was intended for sale. It had, he said, been specially separated from the good fish and was about to be relegated to the refuse tin when the Inspector arrived. The fish intended for frying was in the baskets and covered up; this the prosecution admitted to have been perfectly good.—The Magistrates convicted the accused, holding that the fish in question was intended for sale. They fined defendant 40s. and costs, 10s., or, in default, fourteen days' hard labour.—A fortnight was allowed for payment.

WILLIAM BUSTON, a butcher, of Derby, was charged at the Borough Police Court, Chesterfield, on July 5, with exposing for sale at Chesterfield, on June 26, as human food, certain unsound meat not fit for human consumption. The information was laid by Charles Edward Wood, sanitary inspector for the borough. Mr. John Middleton appeared to prosecute, and Mr. Moore, Derby, defended.—Mr. Middleton said it was the custom of the defendant to have a stall in the market on Saturdays. He believed he also had two shops in Derby. The meat displayed on his stall on the date named attracted the attention of Mr. Wood, the sanitary inspector, who secured the services of the medical officer of health for the borough and the veterinary inspector. They inspected the meat. The portions complained of—about seven or eight pieces—were mixed up amongst joints in respect to the quality of which they had no complaint to make. There could

be no question as to the unwholesomeness of the meat seized. Some of the pieces were so decomposed as to contain maggots. Under the stall was a bucket, in which, among other joints, was found a piece of meat of bad quality. The bad joints were seized, and after defendant had been given an opportunity to send somebody to look at them, they were destroyed.—Mr. Charles Edward Wood, sanitary inspector, said he saw at first sight that some of the meat exposed on defendant's stall was not good, but he thought it advisable before saying anything to the defendant to fetch Dr. Richards, medical officer of health. He found ten pieces of bad meat on the stall. He believed they were parts of an animal that had not been slaughtered in a proper manner. With regard to two of the pieces, putrefaction had set in; and he regarded the whole of the pieces seized as totally unfit for human food.—By Mr. Moore: It was because he was in doubt as to the quality of the meat that, before complaining to the defendant, he sought the Medical Officer of Health. After seizure the meat was left in an open shed until destroyed some hours later.—Dr. M. Richards, medical officer of health, gave evidence of a similar nature. He said there was an almost total absence of fat on the pieces seized. They were full of blood, stank, were flabby and decomposed. He regarded the meat as totally unfit for human consumption.—By Mr. Moore: He did not think putrefaction was a pure question of degree, and that it set in at the moment when the animal was killed. He did agree that maggots were not necessarily a proof of putrefaction. It was a fact that the defendant gave them all the assistance in their examination.—Dr. Mackintosh, sanitary inspector to Chesterfield Rural Authority, said he was of opinion that the parts seized were portions of an animal that had died otherwise than by slaughter. He regarded it as altogether unfit for human food, and if so consumed would be calculated to cause sickness and possibly even death.—By Mr. Moore: The lean portions were dark-coloured, and had a very bad smell.—Mr. Frank Pearson, veterinary inspector for the borough, gave similar evidence.—For the defence, Mr. Moore said there was a direct conflict of expert opinion, for he was going to call two veterinary surgeons to say the meat seized was good and fit for human food. He pointed out that the defendant did all in his power to expedite the inspection of the meat. The examination, he maintained, was a very lax one.—Mr. Frank Somerset, M.R.C.V.S., Chesterfield, said he examined the meat at the Highway yard. The parts appeared to have been roughly handled. There were only two of the pieces a little dark. He thought the meat was from a bull which was coarse and flabby in its composition. He could not detect, except in one piece, a smell that could be described as tainted. Except for two pieces, he regarded the meat as fit for human food. He believed the parts were from a slaughtered animal, and from the same as the other meat on the stall.—By Mr. Middleton: The meat was not fat, as it was from a bull. There was no foul odour, and with two exceptions it had a perfectly sweet smell. In warm weather he believed putrefaction set in directly the animal was slaughtered.—Mr. Fredk. Douthwaite, assistant to the previous witness, said, save for two pieces, taken from the neck part, the whole were perfectly sweet, and he would have been quite ready to eat them if properly cooked.—By Mr. Middleton: There was an almost total absence of fat on the pieces seized.—Mr. Fowke, cattle dealer, Derby, said defendant bought a bull of him for £18 5s. on Monday preceding Jubilee day.—A journeyman butcher, named Garnet, said he slaughtered a bull, "as sound as a bell of brass" for the defendant, and consigned it to him at Chesterfield.—It was agreed to fix the number of pieces at seven, and the Bench decided to inflict a fine of 20s. in regard to each of the seven pieces, and the costs of the proceedings.

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Food and Sanitation.

SATURDAY, JULY 17TH, 1897.

CONDENSED MILK: ITS USES AND LIMITATIONS IN INFANT-FEEDING.

By CHARLES GILMORE KERLEY, M.D.,
 OF NEW YORK.

*Lecturer on Diseases of Children in the New York Polyclinic;
 Assistant Attending Physician to the Babies' Hospital.*

THROUGH the ignorant use of condensed milk as an infant food, many lives are lost yearly in our larger cities, while, on the other hand, to its intelligent use

may be attributed the fact that many lives are saved. In considering the value of any artificial food for infants, we must be governed by one standard—that of mother's milk, the nourishment the child has a right to expect.

An analysis of mother's milk shows that it contains from $3\frac{1}{2}$ to 4 per cent. of fats; 2 per cent. of proteids, and 7 per cent. of sugar. The analysis of a condensed milk mixture, when diluted for use in the proportion of one part in six of water, gives us 1 per cent. of fat; 1.2 per cent. of proteids, and 8 per cent. of sugar, a greater part of the latter being cane sugar. It is extremely rare, however, that we meet with a child that is being fed on so strong a mixture, for the reason that it will almost surely produce colic and indigestion. The condensed milk-fed children who come under my care are being fed, as a rule, on a mixture diluted to one in twelve or one in fourteen. The one-in-twelve dilution gives a mixture containing 0.5 per cent. of fat; 0.6 per cent. of proteids, and 4 per cent. of sugar. Comparing this with breast-milk, it may readily be seen how inefficient it must be for a permanent diet. Even if the one-in-six dilution is given, it will still be inadequate.

Apparent as the shortcomings are, many children will do comparatively well in very early life on the weaker dilutions, that is, one-in-twelve or one-in-fourteen. There is sufficient of the carbohydrate to produce heat, and the proteids, though small in quantity, furnish the requisite amount of nitrogen. The proteid of cows' milk differs from that of woman's milk in chemical composition, and is more difficult of digestion. This we have known for a long time; but there is another important difference: The child requires a smaller amount of the proteids of cows' milk, although the relative nutritional properties of the proteids cannot be exactly determined. This is not a supposition, but a fact that has been demonstrated clinically to my satisfaction, and it helps to explain why infants will do well for a time on condensed milk. Many thrive on the ordinary canned variety, diluted one in twelve, until the third month is reached; then the demands of the system exceed the supply of fat and proteids. If the diet is continued, rachitis and malnutrition of varying degrees will almost always ensue.

Of the many hundred marasmic and rachitic infants that I have had an opportunity to observe, fully 95 per cent. had been fed on the meal foods or on canned condensed milk, chiefly the latter. This ill-conditioned class of children, with their starved muscular and nervous system and catarrhal tendencies, fall an easy prey to the infectious diseases during the entire year, to bronchopneumonia in winter, and to the gastrointestinal diseases in summer. Notwithstanding what has been said, I occasionally meet with children that have been fed exclusively on condensed milk up to the ninth or tenth month, and that have thrived fairly well. These will usually present some evidences of bone rachitis, although the development otherwise will apparently be normal. These infants are held up to us as evidences of the value of the diet in question, and we hear of a great many more than we see. These isolated instances are to be explained by the fact that there are a few infants whose adaptation to abnormal conditions is so great that they cannot be injured by ordinary improper feeding.

An illustration of this was furnished by the case of a well-nourished one-year-old infant who was brought to the out-patient department of the Babies' Hospital to be treated for bronchitis. Its diet up to the third month had been mother's milk and condensed milk. Since then it had consisted of meat, potatoes, bread, rice, crackers, soup, and condensed milk. Tea and coffee were given when the child wanted a drink, and it had beer on Sundays and holidays. Another case in point: A babe six months of age was brought to the dispensary on account of a sharp attack of diarrhoea and vomiting. In addition to medicinal treatment, a diet of barley-

water and egg-water was ordered. Recovery followed shortly, and the mother was instructed to gradually resume the former milk diet. I did not see the patient for two months, when he was brought to the dispensary because of an attack of whooping cough. While being undressed, preparatory to an examination of the chest being made, I noticed that the stomach was enormously enlarged. Upon inquiry as to the cause, the mother replied that she supposed it was due to the large quantity of egg- and barley-water taken. A second gastro-intestinal attack had followed the resumption of a milk diet, and the mother thought it would be easier to keep him well on egg- and barley-water than to keep him ill on milk. He had ingested from five to six pints of this preparation daily, and although rather pale, was strong and active. These children thrive for the same reason that older children sometimes thrive on an exclusive diet of canned condensed milk or of plain meal, but the badly-fed children who manage to escape resulting disease because of special powers of adaptation are few in comparison with the number that fail. In short, condensed milk is unsuitable as a permanent infant food, in that it is inadequate to the demands of a growing child.

In spite of what has been said, my out-patients consume hundreds of pounds of condensed milk yearly, and under my direction. If condensed milk is so unsatisfactory a diet, as generally used, when, how, and under what conditions may its use be advanced? To begin with, I employ condensed milk voluntarily under one condition only. I meet with a few delicate infants, usually from two to ten weeks old, who must be bottle-fed, and for whom it is impossible to modify fresh cows' milk. These children are unable to assimilate the proteids contained in fresh cows' milk in sufficient amount to thrive; and under these circumstances I order the unsweetened or canned condensed milk, preferably the former. A dilution of one-in-twelve will oftentimes be borne without inconvenience, and the child will do well for six or eight weeks, when it will be able to digest a modified fresh cows' milk containing a low percentage of proteids. Why the children are able to digest and assimilate the proteids of condensed milk when those of fresh milk will produce illness, I am unable to explain.

I employ the canned condensed milk because I am obliged to do so in the case of several hundred infants each year. I use it among the very poor, the ignorant, and the careless who bring their children to the dispensary, and for this reason: The very poor cannot afford cows' milk at 6 or 8 cents a quart, neither can they buy refrigerators or ice to properly keep the milk. The ignorant cannot appreciate or follow out the instruction as to the dilution and care of the milk. This class also may be included under the first heading. We occasionally meet with representatives of the careless class in the better walks of life. They insist upon feeding condensed milk to their children against our wishes, their excuse being that such a plan is the easiest to follow. The wives of the American and Irish labourers comprise a goodly number of the indifferent class. The proprietary foods are happily excluded from the uses of the poor, for the reason that they are expensive.

Our only resource the year round with many infants is the sweetened canned condensed milk. It is inexpensive, it will keep sweet several days in hot weather without ice, on account of the added amount of cane sugar, and is easy of administration. Having this preparation with its imperfections forced upon us, how are we to use it? We have seen from the chemical analysis that the percentage of proteids and fats is low. We would not expect children to be properly nourished on it, and clinically we know that they are not. In the feeding of infants the percentages constituting a proper diet should ever be borne in mind, and as nearly as possible correct formulæ should be worked out on this

basis. We must supply to the condensed milk-fed infant the deficient amounts of fat and proteids. If the parents of the patient are well-to-do, cream may be added in proper proportion to make up the requisite amount of fat. Among dispensary patients, cod-liver oil supplies the deficiency. The dose must vary according to the age, the ability of the child to digest it, and the season of the year. I prescribe from 10 drops to a dessertspoonful, three or four times daily after feeding. As a rule it is taken readily. During the very hot weather the dose must be reduced or the oil discontinued if there are evidences of gastro-intestinal disturbance.

The proportion of proteids will still be low, but they may be increased by adding the condensed milk to a meat broth. One pound of lean beef is boiled in one quart of water until the liquid is reduced to one pint. It matters little what portion of the animal is selected so long as lean muscle-fibre is used. The broth prepared in this way, according to the analysis of John S. Adriance, of New York City, contains 0.8 of 1 per cent. of proteids; so that if one part of condensed milk is added to twelve of broth, the mixture will contain 0.5 per cent. of fat; 1.4 per cent. of proteids, and 4 per cent. of sugar. This will answer for a child of three months of age. Fat is supplied by the use of cod-liver oil. When the sixth month is reached, one part of condensed milk may be added to nine of broth. The percentages then will be, approximately, .75 per cent. of fat; 1.7 per cent. of proteids, and 5 per cent. of sugar. This, with cod-liver oil, will answer until the eighth or ninth month, when the critical nursing period will have been passed and barley and oatmeal gruel, with other meal mixtures, may be allowed.

The conclusions arrived at are as follows:—

1. In the artificial feeding of infants, always determine as exactly as possible the percentages of the food constituents.
2. Condensed milk alone is an indifferent substitute for mother's milk, no matter what the age of the infant may be.
3. Condensed milk alone should not be given after the third month.
4. Condensed milk, fortified, may be made an acceptable diet for infants; alone, it is a food upon which a certain number of children exist until age or changed conditions allows of a better diet; and inasmuch as there is nothing to take its place among the very poor, its value to them is inestimable.

IMPORTANT SANITARY DECISION.

At Southwark, on June 24, Mr. Slade gave judgment in regard to an important sanitary prosecution, which had been before the Court at various times during the past three months. Mr. Slade said the Metropolitan Industrial Dwellings Company (Limited) was summoned before him by St. Saviour's District Board of Works for disregard of a certain sanitary notice served upon them in respect to No. 7 block, Mowbray-buildings, Red Cross-street. At the commencement of the hearing it was contended that the notice was bad, inasmuch as it ought to have specified the nuisance complained of under sub-section B of the second section of the Public Health Act; and also that the company were not liable under Section 4, as persons "by whose act, default, or sufferance" the nuisance arose, and "Reg. v. Parlbey" was relied upon. He thought that in the circumstances the notice was sufficient, and that the defendants were the persons upon whom it was properly served. He was aware of the difficulty which existed in carrying out the necessary alterations owing to the limited space of ground upon which Mowbray-buildings stood, and he could not allow the question of expense to influence his decision, seeing that the Industrial Dwellings Company was a commercial speculation, competing with common lodging-houses, which

were carried on under stringent regulations. In his opinion the building could not at present be considered to be in a sanitary condition. He imposed a fine of 40s. and 10 guineas costs. It was arranged that similar summonses with regard to six other blocks of the same dwellings should stand adjourned, in order that the defendant company might consider whether they would appeal against the magistrate's decision.

LADY HOSPITAL DOCTORS IN AUSTRALIA.

THE lady hospital doctor has been put to the test in Australia, and has emerged triumphantly from the trial. Miss Gamble and Miss Greig, on finishing their year of office as members of the resident medical staff of the Melbourne Hospital, were called into the committee-room and congratulated by the chairman. Shortly after their appointment Miss Greig and Miss Gamble were subjected to what the chairman characterised as most unfair, unmanly, and almost brutal conduct on the part of their male associates on the hospital staff, but by their quiet and unostentatious discharge of every duty that fell to their lot they lived down this opposition. As this was the first instance on record in the history of the hospital of the committee publicly thanking retiring members of the medical staff, the ladies had some compensation for the annoyances to which they were subjected by their male colleagues in residence.

WORKHOUSE MILK.

AT Cavan Quarter Sessions the case was heard of James Flood, appellant (defendant); the Guardians of the Poor of the Oldcastle Union, respondents (plaintiffs). Mr. John Clark, solicitor, appeared for plaintiffs; Mr. Girvan, solicitor, was for the defendant. The appeal was from a decision of the Oldcastle Petty Sessions Bench, who fined the defendant £10 for supplying adulterated new milk and £3 for supplying adulterated buttermilk to the Oldcastle Workhouse.

Mr. Clark said the defendant, James Flood, had entered into a contract for the supply to the Guardians of "pure new milk of the best quality," and also for the supply of buttermilk, and this prosecution was brought, as he would show by evidence, because the Guardians found that there had been a very gross adulteration of the article in question.

Mr. Thomas F. Jenkins, Clerk of the Union, said Jas. Flood was the union milk contractor up to the 1st of May last. The bond (produced) was signed by Flood when he was declared the last contractor.

By Mr. Girvan: The terms of Flood's contracts were for a supply of pure new milk of the best quality to produce not less than 10 per cent. of cream, and to stand the workhouse test. The workhouse test meant testing the milk by means of lactometer. On the occasion of the taking of the contract Mrs. Flood said she'd rather have the milk tested in the workhouse than submitted for analysis, and would rather be fined by the Guardians than go into court. During the time Flood had the contract he was fined 12 times, or £12 in all by the Guardians. The milk until this occasion was not submitted to analysis.

Sir Charles Cameron's certificate of analysis (produced) stated that the sample of Flood's milk submitted to him had been adulterated with 84 per cent. of added water. Had never known Sir Charles Cameron to be wrong, but had seen something to that effect stated in the papers.

To Mr. Clark: The Guardians were ordered by the L.G.B. to take this prosecution.

Mr. Luke Gibney, Master of the Oldcastle Workhouse, said when Flood's milk was brought into the house on March 4 last in the usual way by the contractor's servant boy, who usually delivered it, witness, in the

presence of the boy and the Workhouse porter, took a sample of new milk, which he divided into the usual three portions and sealed into three bottles, one of which he gave to Flood's man, another of which he sent forward to Sir Charles Cameron for analysis, and the third of which he kept himself. Before taking the samples he informed Mr. Flood's boy of what he was about to do, and to mix the milk in any way he wished before he filled the bottles with it.

Mr. Girvan said he was in a position to show that this sample of milk was not near so bad as the character given of it by Sir Charles Cameron. He would produce Professor Tichborne, and he would give them a very different account of the milk.

His Honour: Was Professor Tichborne examined before the magistrates?

Mr. Girvan: No.

His Honour: Then what power have we to examine him here? If he had been examined before the magistrates and an opportunity thus afforded the Guardians of having Sir Charles Cameron here to meet the professor's evidence, I could understand it. However, go on.

James Flood, the defendant, was then examined by Mr. Girvan, and said: I entered into an agreement in the year 1894 with the Guardians by which I was to be fined £1 every time that the milk was not up to 10 degrees of cream, and I was fined twelve or thirteen times.

His Honour (sarcastically): The poor have reason to bless you.

Flood: I believe so. I sent forward my portion of this sample of milk to Professor Tichborne for analysis.

Mr. Girvan: Did you put any water in the milk? No, I just gave it as I got it from the cows. As for the buttermilk, I don't churn myself, and we get our buttermilk from a man that lives above me.

To Mr. Clark: I have been workhouse contractor nine years, and have been prosecuted for my milk four or five times. I was only fined once before and this last time.

Mr. Clark: Weren't you fined £10 before? I was, but that was for paying Sir Charles Cameron. That was in 1893? Yes.—Mr. Clark: After that you preferred to leave yourself to the Guardians, and you wouldn't take the contract only the Guardians bound themselves not to prosecute you? Yes.

His Honour: For what? For selling water to the poor for milk?

Witness: Oh, no.

In reply to his Honour witness said it was his wife sent the bottle to Professor Tichborne.

Professor Charles Tichborne was then called, when Mr. Clark said he must object to this new evidence being introduced into the case at this stage of it.

His Honour, in admitting the reasonableness of Mr. Clark's objection, said he knew that the Professor had been brought forward from time to time to contradict Sir Charles Cameron, and then Sir Charles had been brought down to meet the Professor.

Mr. Girvan said in the Court below he was going to get the case adjourned in order to have the Professor brought down, but Mr. Clark objected.

His Honour said he would hear the Professor.

Professor Charles Tichborne was then sworn and examined by Mr. Girvan, and gave evidence of the result of the analysis made by him of a sample of milk sent him by the defendant Flood in the bottle produced. The result of his examination was that the milk had been adulterated with 10 per cent. of added water. The sample was 21 days old when he received it, and if he had not made the usual allowance for its age at the time of making his analysis the percentage of added water shown would be 14.7. That was to say, that in every 100 parts of the mixture there would be 85.3 of pure milk and 14.7 of added water. The Professor explained that in making these analyses a different

system was followed by Sir Charles Cameron, for whom he has the greatest respect, from that adopted generally by analysts. Sir Charles' return was based on what he assumed was the mode of operation of the milk adulterator. If he (the Professor) followed Sir Charles in his method of calculating the result of an analysis, the result obtained by him in the case of the sample sent him by Flood would show 44 per cent. of adulteration.

Mr. Girvan: There is such a considerable difference between the Professor's analysis and that of Sir Charles Cameron that it is possible Sir Charles might have got some of the samples sent in to him mixed.

His Honour: Or the Professor may have got a different sample to test. I can well suppose that a man who has been defrauding the poor for so many years is quite equal to sending forward to Professor Tichborne a wrong sample for analysis. Take this blue paper (Sir Charles Cameron's certificate) Professor; would that suggest to you milk that has been very badly adulterated?

Professor: On these figures it would.

His Honour: Sir Charles and you must not have got the same milk?

Professor: I suppose so.

His Honour: I know very well that Sir Charles Cameron and Professor Tichborne have a different way of calculating these analyses, but in the end it comes very much to the same. What I have to decide here is, was the sample sent up to the Professor a sample of the milk that Sir Charles Cameron analysed. I know that there is no more competent man than the Professor who stands before me. I have had himself and Sir Charles Cameron before me frequently when I was a police magistrate, and I know that though they adopt a different method of procedure they arrive at very much the same conclusion in the end. I wish that you and Sir Charles would agree as to your method of procedure, it would make these matters much simpler if you did.

Mr. Girvan asked his Honour to allow the third portion of the sample remaining in the hands of the workhouse master to be now sent forward to Somerset House for the purpose of having it analysed.

His Honour said it was now too late to adopt such a step. In a case of this kind he must come to the best conclusion he could. The proceeding with which Flood was here charged was the meanest act a man could be guilty of. Trying to shove in bad milk amongst the children in the workhouse and the poor. He took the contract with a determination that he would have only to pay such fines as the Guardians would impose, which meant, he said to himself, "every time they catch me." He looked a highly respectable man, and had been supplying the Guardians for a considerable number of years. But respectable as he looks and pious as he

looks, I suppose he had some friends amongst the Guardians, and, knowing that he would send in water, some of these got this clause inserted. He did send in bad milk several times, and was caught and fined for it some twelve times, he tells us. That being so, it is a question whether this pious-looking man, who was capable of sending in bad milk to the poor in this workhouse, would be capable of sending forward a wrong bottle to Professor Tichborne. He had not the slightest hesitation in confirming the conviction recorded in both these cases. It was an outrageous thing for a man to send in such milk to the poor and to children. He would allow £1 for witnesses' expenses in the new milk case, and 10s. in the butter-milk case, and give two guineas costs in one case and one guinea costs in the other.

Having made the orders, his Honour said: "I have the greatest possible pleasure in mulcting this gentleman (laughter), and, Professor, don't forget to charge him a good big fee for coming down here."

COCOA.

At Birmingham, Leonard Charge, provision dealer, High-street, Harborne, was summoned for selling a packet of cocoa containing 40 per cent. of sugar and 30 per cent. of arrowroot.—George Hodgetts, provision dealer, High-street, Harborne, was summoned for selling cocoa containing 40 per cent. of sugar and 15 per cent. of sago starch; the Birmingham Industrial Co-operative Society (Limited), Great Francis-street, were summoned for selling cocoa containing 35 per cent. of sugar and 15 per cent. of starch; and also Messrs. Bromley Brothers, provision dealers, High-street, Harborne, for selling cocoa containing 40 per cent. of sugar and 15 per cent. of sago starch.—Defendants in the last three cases said that their assistants had neglected to place a label on the cocoa showing that it was a mixture.—Mr. Brame suggested that defendants should make their employees spend the next Wednesday's half holiday in fixing labels upon the packages.—Fines of 40s. and costs were inflicted in each case.

At North London, the Hackney Vestry, by Mr. H. T. Tiddeman, prosecuted three shopkeepers for selling as cocoa an article to which starch and sugar had been added. Edward Willomatt, of Gainsborough-road, whose sample was alleged to contain 85 per cent. of foreign substances, said he had only taken the business a few weeks. His predecessor cautioned him about margarine and chicory and coffee, but said nothing about the cocoa, consequently, when Inspector Panter's daughter asked him for a quarter of a pound of cocoa he handed it her without saying it was a mixture. Fined 10s. and 12s. 6d. costs.

John Stokes, of Gainsborough-road, whose sample

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contained 60 per cent. of foreign substances, explained how it happened. He did not sell loose cocoa, only packet cocoa. His assistant offered a 2d. packet to the inspector's daughter, but she refused it saying she wanted loose cocoa. And then his resourceful assistant broke open a packet and handed her the contents in another paper. In reply to the Magistrate, Mr. Stokes said he had been a stonemason before he became a grocer. He was fined 40s. and 12s. 6d. costs.

SOMERSET COUNTY COUNCIL AND ADULTERATION.

DR. ALFORD, county analyst, stated that during the quarter he had analysed 215 samples, six of which were adulterated, but none of the adulterations were prejudicial. Dr. Alford then dealt at some length with the action of the Axbridge magistrates at a recent date in regard to a prosecution for adulteration of milk. An Axbridge man was summoned for adulterating milk with 17·7 per cent. of added water, but the case was dismissed on account of an alleged informality in his (the analyst's) certificate, although the latter was in accordance with the form which had been upheld on two occasions on appeal.

Mr. Edwards: I was not on the Bench.

On the motion of Mr. Goodford it was agreed that the clerks to justices throughout the country should be supplied with a copy of so much of the report as referred to the Axbridge prosecution.

The council rose after a sitting of four hours.

MONAGHAN AND DRUG ADULTERATION.

THE report of Sir Charles A. Cameron, public analyst for the County of Monaghan, contained the following:—"For the Guardians of Carrickmacross Union five drugs were analysed—namely, digitatus, compound tincture of gentian liquid, extract of cascara, sagrada of iron wine, and salicylate of soda. The extract of cascara, sagrada, and salicylate of soda were pure. The other articles were incorrect, the hippo wine being quite a different article from the correctly made-up drug. Some years ago a much worse and much larger collection of drugs were analysed for this union. The articles sent by the constabulary were of better quality than those received from neighbouring counties. Total number of analyses made in the county during the five months covered by the report, 53.

"COOLING POWDERS."

AN inquest held by Dr. Wynn Westcott, at Hackney, on the body of Lawrence Albert Waters, aged six, the son of a draper, of 127, High-street, Homerton, showed, according to the evidence of the mother, that the child was taken ill on Sunday with pains in the stomach. She gave him a cooling powder, but he died next day.

Dr. A. S. Dawson, of 118, High-street, Homerton, stated he called about two o'clock on Monday afternoon and found the child dead. This was the third case in the same street recently where he had been called in after these powders had been given. It was well-known in the profession that the powders contained tartar emetic—a preparation of antimony, a poison which had a very depressing effect. The child died of syncope following pneumonia, and he believed the powder accelerated death.

The jury returned a verdict in accordance with the medical evidence, adding, "We recommend that some statutory limit should be placed on the sale of such drugs, so that they could not be administered in the absence of skilled medical attention."

The Coroner said he would forward the jury's rider to the proper authorities.

EDINBURGH REQUIRES MORE SANITARY INSPECTORS.

THE Public Health Committee of Edinburgh Town Council on July 1 resolved to recommend the appointment of a chief sanitary inspector. It is estimated that the salary of a chief and four divisional inspectors would amount, after deduction of the contribution received from Government, to £600 or thereby.

USE OF BORIC ACID IN MILK.

AT Barry Police-court, on July 2, Mr. L. Wood and Mr. J. Lowdon heard an interesting case of alleged milk adulteration, Mr. W. E. R. Allen, deputy-clerk to the Glamorgan County Council, appearing to prosecute Wm. Clacee, Holton-road, Barry Dock, and John Connor, Windsor-road, Penarth, under Section 6 of the Food and Drugs Act. Mr. T. J. Hughes, Bridgend, appeared on behalf of Clacee, and Mr. A. Jackson, Barry Dock, defended Connor.—Mr. Allen, in opening the case, said the charge was one in which fresh milk had been asked for, but instead milk with 0·3 per cent. of boric acid had been supplied. The certificate of the public analyst was put in, and that, unless contradicted, was sufficient evidence. Mr. Hughes had kindly given him notice that he was not going to seriously contest the case, and that had enabled him to curtail expenses very much.—Mr. Hughes said he proposed to plead guilty on behalf of his client.—Mr. Wood said, however, the bench would require to know the facts of the case in order to determine the penalty.—Mr. Allen then proceeded to state the case, and said the purchase of the milk was made on April 29. The boric acid was used as a preservative, and to keep stale milk from turning sour. But in this case the acid had been used to excess, and, therefore, was injurious to health. The medicinal dose of boric acid for adults was from five to thirty grains, and for children three to four grains. In these cases it was found the milk contained 0·3 per cent. of boric acid, or 52 grains per quart, which would be about the quantity taken by a child in twenty-four hours. Mr. Allen was about to read an extract from the county medical officer's report in regard to an enquiry which had been directed into the adulteration of milk, when Mr. Hughes objected to the reading of ex-parte reports.—Mr. Jackson stated that he also pleaded guilty on behalf of his client, without any qualification, and the question was as to penalty.—Mr. Hughes said he would not object to Mr. Allen stating shortly what the opinion of the prosecution was on the subject, and also the purport of Dr. Williams's report.—Mr. Wood said he would like to hear Dr. Williams in order to get a clear prescription of the extent of the offence.—Dr. Williams, the medical officer of health for the county, was then sworn, and, in replying to Mr. Allen as to whether, in his opinion, boric acid in milk was injurious or not, said if a child took a pint of milk per day with 0·3 per cent. of boric acid in it, the amount of acid taken by child would be 26 grains, and if a child took a similar quantity of milk with 0·2 per cent. of acid 17 grains would be consumed. This quantity was too much for any child, and he was of opinion that 0·1 per cent. was quite sufficient to preserve the milk for any reasonable length of time, and anything above that quantity would cause depression of the action of the heart and other disorders.—Mr. Hughes, addressing the bench for the defence, said he took exception to a remark made by Mr. Allen, that when a person asked for milk he was entitled to have milk and nothing but milk. That was not the position taken up by Dr. Williams, who admitted that 0·1 per cent. was sufficient to preserve the milk, and quoted the opinions of Dr. Stevenson, of the Home Office, and Dr. Hill, of Birmingham, who were also prepared to recommend a similar quantity. He, therefore, asked the bench to say that where boric

acid was added in a reasonable degree the Act was not disobeyed. Mr. Clacee had received instructions from his wholesale firm to add considerably under 0.1 per cent., so that there could be no desire on his part to fraudulently add the quantity of acid which had been put in, and this was not a general system, but an isolated case, which had been caused through misadventure.—Mr. Wood pointed out that whatever the bench decided in this case would not affect the question one way or another as to whether smaller quantities of boric acid would be admissible.—The question of the costs having been considered, the Bench imposed a fine in each case of 40s. and costs, including advocate's fee, amounting to £5 5s.—Mr. Hughes: My friend, Mr. Allen, will find his five guineas very expensive, for no solicitor will give him notice again.

DISAPPEARANCE OF A WEST RIDING INSPECTOR.

Much surprise has been created in Wakefield and the surrounding district by the disappearance of one of the officials of the West Riding County Council, and as it is rumoured, says the *Leeds Mercury*, that he secured a good round sum of money before he took his departure, and it is believed he has eloped with a widow, the affair has caused much gossip in the district. Nearly three years ago the West Riding County Council required the services of a person to act as inspector under the Weights and Measures, Food and Drugs, and Shop Hours Acts for the Central or Wakefield district. Mr. Charles William Macdonald, a Scotchman, who at the time he applied for the post in the West Riding was acting as Assistant-Inspector of Weights and Measures at Middlesbrough, and it is said that he had previously held a similar appointment at Leeds, was appointed at £150 a year. In support of his application Mr. Macdonald produced excellent testimonials, credentials of the highest possible order, and his character was said to be without spot or blemish. Macdonald was, until recently, very attentive to his duties, and frequently appeared before the magistrates to prosecute offenders in his extensive district. On Friday, the 18th ult., Macdonald saw Mr. A. Hayley, his chief, informed him his wife had had a legacy of £2,000 left in Ireland, that it was necessary for him to go over there at once, and he asked for leave of absence until the following Wednesday, the 23rd ult. The application was acceded to, and Macdonald, who had told his wife that he had to go to Ireland on office business, at once went away. He did not return last week, but a letter, without address, dated from Dublin, on the 23rd, was received by Mr. Hayley purporting to come from Macdonald, and stating that he was ill and unable to return. His wife also received a similar letter. As it was found that the missing Inspector had not paid over certain fees, &c., in his possession for about two months, suspicion was aroused, and on enquires being made it was found that an attractive young widow, named Amy Dukes, a dealer in the soothing weed at Belle Vue, with whom the Inspector had lately been on terms of close intimacy, had also disappeared, and it is supposed the couple are together somewhere. The story about the £2,000 and the visit to Ireland was found to be untrue, and some rather startling revelations were made. It was found that recently the missing Inspector had obtained loans of money from various Wakefield legal and other gentlemen, from money-lenders and loan offices at Wakefield, Leeds, and other places, and it is said that he received in this way upwards of £500 in various amounts. Amongst others who have been duped are Mr. J. B. Cooke, the Clerk to the West Riding Magistrates at Wakefield; Mr. Bielby, of the Alexandra Hotel, Belle Vue; Mr. Gosnay, outfitter, pawnbroker, &c., Kirkgate; and others. An examination of Macdonald's books and accounts as Inspector has been made this week, and it is found that he has taken

nearly £55 belonging to the West Riding, but this sum will, it is expected, be recovered from a guarantee society and from Macdonald's bondsmen. It has also been found that Macdonald has paid a few accounts which are not entered in his books, and, of course, this will go to his credit. The wife of the missing Inspector and her little boy have gone to Middlesbrough, where, it is said, certain parties are anxious to ascertain the whereabouts of Macdonald, who has incurred several debts which he "forgot" to pay before taking his departure. Amongst the Inspector's papers were found a number of dressmakers' accounts, which did not apply to goods supplied to Mrs. Macdonald, a lady of delicate constitution, for whom the greatest sympathy is manifested by all who know her. On Thursday the disappearance of Macdonald was reported to the General Purposes Committee, and a long discussion took place on the matter. It was decided to recommend the West Riding County Council to appoint Mr. Lavers, of Plymouth, as Inspector, in the room of Macdonald, and the question as to what steps should be taken with regard to Macdonald was referred to Mr. Trevor Edwards, the West Riding solicitor, for consideration.

BUTTER.

ELIZABETH BLOWER, grocer, 134, Catherine-road, East Ham, was summoned, at Stratford, by Captain Kittoe, for exposing for sale a parcel of margarine which was not properly labelled.—Defendant pleaded guilty, and was fined 20s. and costs.—Emma Hilyard, of 3, High-street, East Ham, and Charles Diggins, of 3, Market-street, East Ham, grocers, were also summoned for similar offences, and were each fined 20s. and costs.

SPIRITS.

At Sleaford, Charles E. Cox, landlord of the Red Lion, was summoned for selling whiskey which had been adulterated with 26.67 per cent. of water.—Mr. E. H. Godson appeared for the defence, and contended that defendant had added no water, but that the firm who supplied it reduced it to 22 per cent. under proof, and the other 4.67 per cent. was caused by evaporation. He quoted a recent decision of Justices Day and Lawrance in a similar case, and urged that as defendant had added no water, the case must be dismissed.—The Magistrates dismissed the case on the ground of evaporation.

MEAT.

At Marylebone, on July 2, John Buckingham, a butcher, of 32, Great James-street, Lisson-grove, was summoned by the Marylebone Vestry for, on the 26th ult., exposing for sale four pieces of beef and two of mutton which were unsound and unfit for food.—On Saturday last Thomas Gorniot, one of the sanitary inspectors, was passing the defendant's shop, and saw joints of beef and mutton exposed for sale which were unfit for human food. The defendant's wife entered the shop at the time, and said that that was her first appearance at business. The inspector gave her an hour to remove the meat. When he returned, accompanied by Dr. Wynter Blyth, the medical officer of health, he found that some of the meat had disappeared, and some of the joints complained of had been cut up and were again exposed for sale. They were putrid and smelt offensively.—The defence was that the meat was dry and dull-looking, but when trimmed was good enough.—A witness was called to say that a joint he purchased was perfectly good until it was consumed two days later.—Mr. Curtis-Bennett fined the defendant £7 with three guineas costs, or one month's imprisonment.

COFFEE.

AT Dartford Petty Sessions, Mr. Thomas James, grocer, of 6, Lower-road, Erith, was summoned for selling as coffee an article which, on analysis, was found to contain sixty-five parts of chicory. Defendant said he bought the article for coffee, and he sold it just as he received it. He had not the slightest suspicion that it was other than pure coffee. Fined £2 and costs.

SAGO.

AT Kensington, on June 29, James Granville and Co., of 22, Golborne-road, Kensington, were summoned for selling sago containing 12 per cent. of granular starchy matter other than sago, the starch having the characteristics possessed by wheat and barley starch. In defence, Mr. James Granville, who represented the firm, stated that he bought the sago from a well-known firm whose name he mentioned. He produced an invoice which, he said, had reference to the sago, and which stated that it was of a fair quality. He had not sold any sago since the inspector called, and he did not intend to sell any more in the future. Fined 10s. and ordered to pay the analyst's fee.

HOW SOME CHILDREN ARE TREATED.

MR. DREW held an inquest on July 1 on the body of Francis P. C. Clay, aged nine months, the son of a bank clerk, living at 43, Oakley-crescent, Chelsea. On Sunday the mother gave the child a piece of tinned pineapple, and it was afterwards sick, and died the next morning. The medical evidence showed that the death from convulsions was accelerated by the irritation to the stomach by the pineapple. A verdict accordingly was returned.

DRUGS.

ON July 1, at Caergwele, Edward Williams, grocer, Ffrith, near Wrexham, was summoned under the Food and Drugs Act for selling sweet spirits of nitre not up to the standard required by the British Pharmacopoeia. —The certificate of the public analyst was that the nitre only contained one-sixth of the minimum amount of active principle required by the Act. It was, however, added that from the specific gravity it appeared the sample had probably been originally of good quality, and that it had deteriorated from improper keeping. —A fine of 6d. and costs would be imposed, in all 25s.

ICE CREAM DANGERS.

Two children residing in Mayo-road, Willesden, were out with their father on Sunday evening, when he bought them some ice cream near Willesden Church. The children, who were home from boarding school, went to bed, and the next morning, when a servant went to call them, they were both dead. A doctor who was called said that death had resulted from the eating of ice cream while the children were hot through exercise.

A VACANT MEDICAL OFFICERSHIP.

THE appointment of a successor to Dr. John Robertson, Medical Officer of Health for St. Helens, who has received a similar appointment at Sheffield, was considered at a joint meeting of the St. Helens Corporation Health and Parliamentary Committees on Wednesday. There were 37 applications, and these were reduced to eight, as follows:—Dr. Nelson, Blackpool; Dr. Blackburn, of Barnsley; Dr. Dunlope, of Chelmsford; Dr. Harris, of London; Dr. Hawkins, of Dudley; Dr. Moore, assistant medical officer to the port of Liverpool; Dr. Peck, Medical Officer for the Ormskirk Rural Sanitary Authority; and Dr. Rennett, of Aberdeen. The commencing salary is £475 per year.

SANITARY WORK IN ROTHERHITHE.

AT Greenwich Police-court, before Mr. Kennedy, Miss C. Helme, the owner of 1 and 3, Clarehall-place, Rotherhithe, was summoned by the sanitary inspector, Mr. H. Cockburn, for not complying with statutory notices, to abate nuisances at the above premises. Mr. J. Stokes, the clerk, appeared for the Vestry, and the plaintiff was represented by Mr. Jutson, clerk and solicitor to Mile End Vestry.

Inspector Cockburn, who gave his evidence very clearly, was subjected to a severe cross-examination by Mr. Jutson, and some of his replies were very humorous. He stated that he visited these premises on December 29, 1896, and the tenants complained of stench in the houses; he had the drains uncovered for inspection, and found them improperly laid; the traps at No. 1 were not connected with the main drain, the joints were defective, and when the water test was applied it ran out like a sieve; also the drains were not ventilated or intercepted.

The defence was the drains were sewers, and the inspector had no right to order the ventilation of drains or intercepting traps, and as he only had the sanction of the committee to serve the notices, they were bad.

Mr. Kennedy stated that he considered ventilation of the drains and intercepting traps quite necessary, and the inspector was quite right in ordering them under the Public Health Act, 1891. The case had been fully proved, and he fined the defendant £4, and £2 2s. costs.

HAMS AND HAIRS.

IN the Birmingham case, the accused, Messrs. J. Sumner and Son, came off—says the *Grocer*—with flying colours, the case being dismissed with five guineas costs against the prosecutors, the Bacon Curers' Association. The defence was the satisfactory one that the goods had been bought and paid for as English. A point in the case was that the ham in question bore three hairs growing from a single root—this being put forward as a well-known proof that such a ham must be American. Upon this matter Messrs. John Sumner and Son write: "The three hairs growing from one root is well known by every experienced person in the trade as a characteristic of the Berkshire breed of pigs especially, but is not entirely confined to these. During the last few years a large number of Berkshire pigs have been exported to the United States, and this peculiarity has been transferred to a certain extent to that country as well. Although it is undoubtedly desirable, in the interests of honest traders, and certainly in that of the public, that no wrong description should be attached to goods supplied, still it seems an anomaly and a huge injustice that any trader should be at the mercy of an irresponsible representative of a private association such as the Bacon Curers' Association of Great Britain and Ireland. Had we been provided with less ample evidence than we had at our command, it is quite conceivable that the case might have gone against us, in spite of the genuineness of the ham in question, and such a decision to any business firm would have been simply disastrous. We have just been supplied by Messrs. David Hedges and Son, of this city, with a ham from an English pig, killed by them, covered with three-hair clusters." In face of this it is evidently unsafe to rely too much upon the three-hairs proof. We know from the poet that sometimes "Beauty draws us with a single hair"; but three hairs from a hog are rather a weak support to hang a law case upon.

BLUE BUTTER.

"WHAT was the most striking thing you saw in India?" was asked of a woman who had just returned from a tour round the world. "Butter," she replied. "That seems strange, but it is a fact that in India

butter made from the thin milk of the native cow is blue instead of yellow. When I came across this azure substance I vowed I would not touch it, but others did so with evident enjoyment, and, getting the upper hand, I tried the butter, and, to my own surprise, found it delicious. You who see the golden pats of fresh butter can hardly realise what it is to see bread painted blue. The blue butter of India is preferable to the stuff they serve as butter in Norway and Sweden," continued the globe-trotter, "for there we had nothing but oleomargarine."

HOW FOOD IS USED IN THE BODY.

(Concluded from page 322.)

The results summarised below are those of the three experimental periods proper. Those for the short preliminary and closing periods, in which no work was done, are very similar to those of the experimental period of absolute rest.

| | Protein Grams. | Energy. Calories. |
|--|-------------------|----------------------|
| In the daily income—i.e., in the digested nutrients of the food in each period ... | 93 | 2500 |
| In daily outgo—i.e., material consumed: | | |
| Period of severe material work | 79 | 2595 |
| Period of rest | 78 | 2715 |
| Period of severe muscular work | 98 | 4325 |

The daily gains and losses of the body were:

| Period. | Protein. Grams. | Fat. Grams. | Energy. Calories. |
|-------------------------------|--------------------|----------------|----------------------|
| Severe mental work ... gain | 14 | loss 17 | loss 95 |
| Rest gain | 15 | loss 41 | loss 215 |
| Severe muscular work ... loss | 5 | loss 192 | loss 1825 |

Two things are brought out very clearly by this experiment. One is the very large amount of material that is used with muscular work. During the periods of rest and of mental work, 78–79 grams, or 2½ ounces, of protein sufficed to meet the daily needs of Mr. Smith's body; but with the severe muscular work the protein consumption rose to 98 grams. The fuel-value of the materials consumed during the days of rest and mental work ranged from 2600 to 2700 calories, but with the severe muscular work it was increased to 4325 calories. In this case the food did not supply enough, and the body drew upon its stock of reserve material. The draft was partly upon the protein, but mainly on the fat of the body. This is in accordance with very extensive European investigations upon the subject. The chief fuel ingredients are the carbohydrates and fats. When the food does not supply fuel enough the body draws upon its supply of these substances, especially its fat. In Mr. Smith's case, during the periods of rest and severe mental work the body stored about half an ounce of protein and lost about an ounce of fat daily; but with the hard muscular labour it was estimated to lose ½ ounce of protein and 6½ ounces of fat. If the daily food had been increased during the days of muscular work by doubling the amount of sugar and adding half a pound of bacon, the fuel would have about sufficed to meet the emergency. Whether it would have saved the protein from consumption, experiment alone can tell.

The other point of special interest is the consumption of material by the body during the period of severe mental work as compared with the period of rest. In this particular experiment the amounts actually used up were virtually the same in the two periods. In order to learn the effect of mental work upon the demands of the body, it will be necessary to make a large number of very accurate experiments, to extend

them over considerable time, and to study very carefully the income and outgo of phosphorus, sulphur, and other elements, as well as of nitrogen and carbon. All this will doubtless come in good time.

PRACTICAL APPLICATIONS.

The chief interest of experiments of this kind from the purely practical standpoint, is the light they throw upon the ways in which the food is used in the body, and the kinds and amounts which are appropriate for people of different classes and under different circumstances. Of course these few preliminary trials are by no means sufficient to warrant any broad conclusions. Their main value is in the promise they give of what may be done by patient, long-continued, careful experimenting. Much has already been done in this direction in Europe, and there is reason to believe that research will increase both there and in the United States.

One of the many lessons which such inquiry will teach is reasonably clear. Physicians tell us that a large amount of the disease with which they have to deal, especially among well-to-do people without much manual labour, comes from overeating. During the last few years a considerable number of studies have been made of the kinds and amounts of food bought and used by people of different classes and occupations in a number of places in the United States. These have included several groups of professional men and college students, whose eating-habits are doubtless fairly representative. The digestible protein of the daily food of the different groups is computed to range from 93 to 117, averaging 99 grams and the energy from 2830 to 3965 calories, averaging 3390 calories. In the fourth experiments above referred to, the three young, vigorous men were actually found to use on the average 108 grams of digestible protein, with 2660 calories of energy when not engaged in manual labour. A series of respiration experiments, made a number of years ago in Munich, by Professor Voit, Dr. Ranke, and others, gave similar results. A little more food would doubtless be needed for ordinary indoor mental labour. A number of studies of dietaries of well-to-do and well fed men in professional life—lawyers, physicians, and university professors—in Germany and Denmark have shown an average consumption of a very little more protein, and hardly any more energy, than were used by the men in the respiration apparatus.

The inference is that the people in professional and business life in the United States, whose labour is mostly mental and indoors, are inclined to eat more than they need, and that the special excess is in the fuel ingredients, that is to say, the fats and carbohydrates. Taking the results of these and various other experiments together, the details of which cannot be quoted here, we are, I think, justified in believing that the diet of a very large number of people is out of balance. It contains an excess of food-material, and this excess is largely due to the eating of fat meats, sugar, and the starchy foods. These results of accurate observation and experiment thus accord with and explain the current opinion of hygienists as to our ordinary habit of overeating.

THE SCIENTIFIC ASPECTS OF SUCH INQUIRY.

One favourable indication for the future is that these problems are being studied in Europe and, of late, in the United States. There is reason to hope that, with the rapid progress of science in other lines, it may advance in this direction likewise until the laws of the nutrition of man and of animals shall be far better understood. We may also hope that the knowledge will be disseminated and so applied in practical life that great good will come, not only to health and strength and purse, but to the higher intellectual and moral interests of mankind as well.

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UNANIMOUSLY AFFIRMED

the Judgments of Mr. Justice Stirling and the Court of Appeal in the Case of POWELL (trading as **Goodall, Backhouse & Co.**) v. THE BIRMINGHAM VINEGAR BREWERY CO., LIMITED, and dismissed the Appeal of The Birmingham Vinegar Brewery Co., Limited, from such Judgments with costs in favour of **Goodall, Backhouse & Co.**

Dated this 8th day of July, 1897.

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Food and Sanitation.

SATURDAY, JULY 24TH, 1897.

A PROFESSOR OF AGRICULTURE AND HIS KNOWLEDGE OF MILK.—II.

Our issue of July 10 (p. 327) contained some comments upon a curious milk decision at Leek, and on page 328 of the same issue we gave a report of the trial.

Professor Sheldon was one of the magistrates who dismissed the case, and he has favoured us with the following explanation of the course of conduct adopted:

MILK.

"SIR,—You pay me the compliment—in your issue of the 10th—of devoting a leader to my assumed ignorance of what the quality ought to be of average milk. I regret to be unable to add that you augment the compliment by using courteous language. You may or may not be aware that milk as taken from the cow has been found to vary from less than 2 per cent. to upwards of 5 per cent. of fat, and from less than 8 per cent. to more than 17 per cent. of total solids. You may also, perhaps, be aware that, in order to obtain a conviction for adulteration, it must be shown that the milk had been 'altered' after it was taken from the cow. Probably, too, you know that no legal standard for milk exists in this country, and that rebutting evidence—if any—must be heard against that of the analyst. Perhaps, therefore, you will be good enough to say how you would obtain a conviction when the evidence for the defence was more than double that for the attack?—Yours truly,

"J. P. SHELDON,
 "The Editor, "Sheen, Ashbourne,
 "FOOD AND SANITATION. "July 19."

We are well aware of all the variations Professor Sheldon instances, and also of the causes of some of the curious finds, but we are sorry for Professor Sheldon's sake, and the more so because he has written a book on the Dairy, to have to say that these variations, like "the flowers that bloom in the spring," "have nothing to do with the case." An individual bovine disgrace may be found to yield a milk containing less than 2 per cent. of fat, but the milk of no herd of cows has ever been honestly proved to average such a figure. In the case in question the milk was that of a herd.

Samples analysed when it was not known that "the inspector was abroad," showed respectively 2.29, 2.40, and 2.32 per cent. of fat. A sample analysed after warning was given that it would be taken for analysis showed 3.50 per cent. of fat. We wanted to be scrupulously fair to the bench, the defendant, and the prosecution in this case, and as a result of our own investigations we found that the following occurred at the trial:—

The defendant was asked by Mr. Knight, the inspector of Food and Drugs: Do you remember seeing a policeman on June 25?—Yes.

Mr. Knight: Did he tell you that the sub-inspector was going to take another sample of milk on the following day?—I knew he was about; I had been told before.

Mr. Knight: What time do you deliver the milk at the workhouse?—8 to 8.30 morning and 6 to 6.30 night.

Mr. Knight: How was it that you delivered the milk at 7 a.m. on June 26?—I had other business to do.

Mr. Knight: Do you know that there was a sample taken on the 26th?—Yes.

Mr. Knight: Were you milking the same old cows on June 25 as you were on May 25?—Yes.

Mr. Knight: Should you be surprised to hear that the sample taken on June 26 was pure, and contained 3.5 per cent. of fat? (No answer.)

Mr. Knight: How do you account for the sudden rise from about 2 per cent. of fat on June 4 to 3.5 per cent. on the 26th. (No answer.)

Mr. Knight: Come. You knew the sample was going to be taken, can't you account for the difference. You say you were milking the same cows. (No answer.)

In the face of these facts we cannot see that we were in any way wrong in strongly condemning the verdict. If Professor Sheldon considers evidence like the above—more than double (in value, we suppose he means) that for the prosecution—we think he and his fellow magistrates will stand alone amongst thinking men in such an opinion. We said on July 10:—

"On public grounds such decisions as this are

decidedly injurious to the community. Milk is the main food of infants, and the aim of all interested in justice and the public welfare should be to maintain its standard of quality, and not even the fact that it was workhouse milk can justify such a decision as this at Leek. Somerset House is bad enough with its 2.75 per cent. of fat standard, but if this be the best our professors of agriculture can do, the sooner we have persons appointed to educate our professors the better for the public."

We would go farther and say that individual cows yielding the milks which contained less than 2 per cent. of fat ought not to be milked but poleaxed, and a professor of agriculture anxious for the improvement of dairy farming ought to be the foremost in pointing out this obvious fact. But, after all, the individual freak has no bearing on this question. The milk in dispute was that of a herd, and, in our opinion, it is monstrous that ratepayers should pay the price of pure milk for a substance containing 2.29, 2.40, and 2.32 per cent. of fat, even although it was for paupers' use, and especially when a sample analysed after defendant had been warned showed 3.50 per cent. of fat. Our readers can judge for themselves if Professor Sheldon's explanation is lame or not.

THE THREE ANALYSTS OF TOOLEY-STREET AND THE BOARD OF AGRICULTURE.

IF there is any method of achieving heights of fatuousness hitherto unachieved it is safe to reckon that the incompetent advisers of our Board of Agriculture will land that fatuous department there.

Some three "stir it and stump it and blow your own trumpet" analysts have got the ear of the department, and for their own personal purposes are using it and fooling it to the top of its bent. When the Fertilisers and Feeding Stuffs Act came into operation they led the heads of the Board to really think that the only capable agricultural analysts in England were these three modern imitators of the immortal three tailors of Tooley-street. The following is the latest instance of their methods, and it is about as mean and unscrupulous as one as could be imagined.

The *Nottingham Guardian* of July 20 says:—

"A meeting of the Holland County Council was held at Boston yesterday. The Clerk of the Holland County Council read a communication from the Board of Agriculture declining to approve of the appointment of Mr. E. W. Bell, of Spalding, as district analyst under the Fertilisers and Feeding Stuffs Act, and asking the Council to make another appointment.—Mr. Robinson expressed regret that the unanimous appointment by the Council had not been approved, and proposed that the Board of Agriculture be asked to reconsider their decision.—Mr. Proctor seconded, and said that Mr. Bell had made analyses on his behalf and had given every satisfaction.—Mr. Hall and Mr. Pooles supported the proposition, and it was carried."

The Board of Agriculture may be made a catspaw of and not have the sense to know when it is fooled and used, but the Holland County Council has more intelligence and decency. If their own knowledge is to be flouted and insulted by the wire-pulling and whispered lies of some three or five pushing and self-seeking pseudo-agricultural analysts who guide our Board of Agriculture, then we trust the Holland County Council will take the dignified course of making no appointment. The objection has its origin in a mean scheme to secure every Fertiliser and Feeding Stuffs analytical appointment to one of the "inner circle," and the Board of Agriculture ought to have some regard for its honour, and be above being made a tool of.

MERCHANDISE MARKS ACT PROSECUTIONS.

AT Guildhall, London, on July 2, The Metropolitan and Provincial Stores, Limited, 50, Aldersgate-street, and Alfred Butcher, the manager, were summoned before Mr. Alderman Pound, under the Merchandise Marks Act, for that they, on April 3 last, unlawfully exposed for sale an American ham, to which a false trade description was applied.—Mr. Bartholomew Weeks appeared in support, and Mr. F. W. Beck defended. Butcher did not appear, and Mr. Weeks applied for a warrant for his arrest.—The Alderman remarked that the case was called on some time ago, and then Butcher appeared. Under these circumstances he should not grant a warrant, but he would hear the summons against the company.—John Moore, an inspector of the Bacon Curers' Association of Great Britain and Ireland, stated that on April 23 he went to a shop belonging to the Metropolitan and Provincial Stores, at 50, Aldersgate-street. There were four American hams in the window. He went in and asked the manager (Butcher) the price of them. He said they were 8½d. per lb., and that they were Irish. Witness purchased one for 11s. 7½d. He asked that he might have an invoice on which it would be set out that the ham was Irish. He went over to the cashier, and received an invoice which bore the words "Irish ham." Witness then told Butcher who he was, and asked him if he would say that this was an Irish ham. He replied, "I am not sure, I believe some Irish hams are cured in Scotland." He asked for the invoice from the wholesale firm, but the manager said he had not got it. As a matter of fact the ham in question was an American, and had never been to Scotland. He knew it was American before he paid for it.—John Johnson, another officer, gave corroborative evidence, and said defendant volunteered the statement that it was an Irish ham.—Mr. Weeks asked that the summons might be adjourned as Butcher was not yet before the Court.—The Alderman granted an adjournment.

AT the Birmingham Police-court, on the 25th ult., John Sumner, grocer and provision dealer, High-street, Birmingham, appeared before the Stipendiary to answer a summons charging him with "unlawfully applying a certain false trade description to certain goods, to wit, a ham."—The prosecution, conducted by Mr. J. S. Pritchett, was instituted by John Moore, of Holywood, County Down, Ireland, an inspector of the Bacon Curers' Association of Great Britain and Ireland, who said that he visited defendant's shop on March 3 last, and asked for a Devonshire ham that he saw exposed for sale in the window. Defendant's assistant sold him the ham produced, branded "B. W. N., Devonshire," and the assistant said that it was English—Devonshire—ham. He questioned defendant at the time, and was shown the invoice of the ham, which was purchased from Messrs. Brown, Wills, and Nicholson, large curers, of Plymouth. Witness now stated emphatically that his ten years' experience told him that the ham was American, and that it was of such an inferior quality that no one at all familiar with the trade could mistake it for English. Cross-examined by Mr. McCardie for the defence, Inspector Moore said the general appearance—the coarse oily character of the surface and the shape—indicated plainly that it was American and not English.—Another ham was produced, much cleaner, but decided more oily, which the inspector declined to express an opinion about.—The information was volunteered that that was American, and had been bought purposely for comparison.—Pressed to say what proved the ham from Sumner's to be American, he said "three airs that were seen growing from one root." (Laughter).—The defence was that a good price was paid to a respectable firm for the goods, which were bought as home produce, and that there was no intention to defraud.—John Townsend, buyer and curer for Messrs. Brown, Wills, and

Nicholson, was then called, and swore that the ham supplied to Messrs. Sumner was English meat, cured by himself, and that no American goods came into his department. He disputed the evidence of the inspector to the effect that the seized ham was oily, and observed, amid laughter, that three hairs from one root might be found in both English and American pigs.—Mr. Pritchett said he was taken by surprise by the evidence of this witness, and applied for the case to be remanded that he might call further testimony.—The defence objected, as they had several witnesses from a distance.—Defendant and his manager were called, and at the close of their evidence, which proved that the ham was supplied as English Devonshire, and sold by them at 11½d. per lb. as such, the summons was dismissed, and the prosecution agreed to pay the defendant 75 s. costs.—Mr. Pritchett intimated that the Plymouth firm would be proceeded against.

BUTTER.

At Brentford, George Ellesmere was summoned by Mr. R. Watts, an inspector under the Food and Drugs Act for the Central District of Middlesex, for selling adulterated butter.—The inspector said that on March 23 last he was at Southall, and bought half a pound of butter of the prisoner, for which he paid 1s. and 2d. The butter was divided in the usual way. One part of this was submitted to the County Analyst, who certified that it contained 20 per cent. of foreign fat.—To Mr. C. Almond: Witness bought the article as butter and not margarine.—Mr. Almond in defence said that the prisoner was away from his shop in the morning, and an assistant was left in charge. He had other shops, and samples previously taken were found to be correct. He submitted that it was the assistant's fault entirely, and that the butter had been mixed with the margarine. The assistant might have had ill-feeling at the time, as he was under notice to quit.—The defendant then went into the box. He stated that he was employed as a commercial traveller for a wine company, and left his shop at Southall every morning.—The Chairman interposed by stating that if the defendant left his shop he would still be responsible for the action of an assistant.—Mr. Almond replied that he was simply pleading in mitigation.—Continuing, the defendant said that the margarine was always kept distinct from the butter. The dishes in which the butters were kept were washed every Monday morning, and he suggested that they had become mixed.—To Mr. Watts: He suggested that the mixture sold was the best margarine. He thought the best would contain 80 per cent. of butter.—Mr. Watts said this was quite unreasonable.—The defendant said he could guarantee the fact.—The defendant was then charged under the Margarine Act. The inspector pointed out that as the sample taken in the last case was not pure butter, it should have been labelled margarine, which it was not. Of course, no one would give 1s. 2d. for margarine, but the sample taken was margarine, according to the Act of Parliament.—The defendant was further charged under the Weights and Measures Act. In this case the inspector said that the scales in which the butter was weighed were not stamped. The assistant at the shop said that the scales were unstamped.—The Chairman said that the defendant had rendered himself liable to a fine of £20, and in the second case he was also liable to a similar fine. Then there was the offence against the Weights and Scales Act. However, the Bench thought that the case would be met if the defendant paid £2 in the first instance, £1 in the second, and £1 in the third. They gave him the benefit of the doubt, inasmuch as they did not say he committed the offences knowingly.

At Kensington, on June 29, Abraham Rhodes, 184, Uxbridge-road, Shepherd's Bush, was charged with selling half a pound of butter containing 66·7 per cent.

of foreign fat; also with selling half a pound of margarine without enclosing it in a wrapper upon which should be printed in capital letters, not less than a quarter of an inch square, the word "margarine." Mr. Coban prosecuted on behalf of the Hammersmith Vestry. Herbert Cross, a boy in the employ of the Vestry, said he went to defendant's shop and asked him for half a pound of tenpenny butter. The shopman served him, and he tendered 5d. in payment. He afterwards handed it to the inspector of the Vestry appointed under the Food and Drugs Act. The Inspector stated that the butter was analysed, and he handed in a certificate showing that it contained 66·7 per cent. of foreign fat, and that it would come under the head of margarine.—Defendant, in defence, said the samples were satisfactory, and that the shopman had notice to leave.—Fined 20s. and the analyst's fee 10s. 6d. in the first case; and fined 1s. in the second case.—Frederick Brooke, of 248, Uxbridge-road, was similarly summoned, and was dealt with in a like manner. In this case the amount of foreign fat was 71·3.

LIBEL BY POSTCARD.

BEAMISH v. THE DAIRY SUPPLY CO., LTD.

THIS case came on in the Queen's Bench Division of the High Court of Justice, before the Lord Chief Justice and a jury. It was an action for damages for libel, malicious prosecution, and breach of contract. The plaintiff, Mr. Marmion Beamish, a farmer, living at Brook Farm, North Weald, Essex, in November, 1895, entered into an agreement with the defendants, who are a limited company carrying on business as sellers of milk in Museum-street, London, to supply them with milk. The defendants agreed to supply churns for the carriage of the milk, and the plaintiff in accordance with the contract sent milk up to them daily. The libel complained of appeared on a number of printed postcards sent by the defendants to the plaintiff on December 17 and other dates. That of December 17 was in the following terms:—"M. Beamish, Esq. The milk sent by you on the 15th a.m. mail was three quarts short. The attention of the railway officials was called to it before we accepted the consignment. We received four barn gallons five quarts. Kindly see that this quantity is entered in your books." Similar postcards, the body of them printed, with dates and amounts filled in in ink, were sent on December 18, 28 and 31, complaining of a short supply of milk being sent.—The plaintiff's case was that the milk was carefully measured, and to every consignment was attached a label stating the correct amount of the milk supplied, and that the postcards were intended to impute to the plaintiff that he had meant to charge the defendants for more milk than he had actually supplied. The breach of contract complained of was the refusal in March, 1896, of the defendants to receive any more milk under the agreement on the allegation that the plaintiff had heavily adulterated it with water. It was also alleged that the defendants had procured the sanitary authority of West Ham to prosecute the plaintiff for adulteration of milk at the Stratford Police-court, which charge was dismissed.—The defendants in their defence said that the plaintiff repeatedly during March, 1896, delivered milk adulterated by water, and therefore they declined to receive any more from him. While admitting that they sent the postcards, the defendants contended that they bore no defamatory or actionable meaning, and they denied the allegation that they had maliciously prosecuted the plaintiff.—The medical officer of health for West Ham stated that he took out a summons against the plaintiff for adulteration on his own responsibility, but he withdrew it, because he was unable to trace the milk to the plaintiff. It appeared, however, that the defendants paid the expenses.—Mr. Longstaffe, in opening the

defendants' case, said that the reason they put an end to the contract with the plaintiff was that the milk which was supplied to them was adulterated. The plaintiff had undertaken to hand over into the custody of the defendants pure milk. It was not suggested, and never had been, that the plaintiff had adulterated the milk himself, but it was a fact that the milk was repeatedly coming to them adulterated, and if they sold that milk they would be running the risk of a prosecution. The defendants, he submitted, were amply justified in breaking off the contract. As to the libel, it was the fact that frequently a short supply was received by the defendants from some of the many farmers with whom they dealt. They therefore had these postcards printed, which were sent out whenever there was a short supply. Before communicating that there had been a short supply, the defendants always took all precautions to ascertain the accuracy of the figures filled in on the printed cards. No complaint was ever made about these cards being libellous by Mr. Beamish until the matter was put into the hands of his solicitors. With regard to the malicious prosecution, in consequence of continued adulteration samples were taken and submitted to a properly qualified analyst, and counsel contended that the defendants were quite justified in placing the matter before the medical officer of health. The managing director of the company said that the postcards were sent in the ordinary course of business to the plaintiff whenever there appeared to be a short supply. As it was found the milk that came was adulterated, they declined to receive more milk, and gave information to the sanitary inspector of West Ham. They did not take any steps themselves to prosecute the plaintiff—expert evidence was given by a number of analysts who analysed the milk, and they said that between December, 1895, and March, 1896, in the samples they took there was present from 6 to 12 per cent. of added water.—Counsel having addressed the jury, the Lord Chief Justice summed up, telling the jury that the postcards were capable of constituting a libel, and it was for them to say whether in fact they were so. As to the malicious prosecution, the plaintiff must establish that the prosecutors were the defendants, that there was malice on their part, and that there was no reasonable and probable cause. The question of breach of contract was a very small matter. If the milk had been adulterated, then the defendants had a good ground for putting an end to the contract.—In the result the jury found that the postcards did constitute a libel, and assessed the damages at £50; that there was no malicious prosecution; and that there was a breach of contract, for which they put the damages at 40s. Judgment was given in accordance with these findings.

SPENT GINGER.

At the Kirkham Petty Sessions, on June 30, Edward Jolly and Mary Jane Knowles, grocers, of St. Anne's-on-the-Sea, were each fined 1s. and costs for offences against the Food and Drugs Act. Jolly sold a police officer ginger which contained upwards of 15 per cent. of spent ginger, whilst that purchased from the other defendant was found to contain upwards of 10 per cent. of that substance. This was the third time the cases had been before the Court. At the first hearing adjournments were granted in order that the samples left with the defendants might be analysed as against the certificate of the county analyst, and the reports received stated that the samples were found free from spent ginger and other foreign admixture. The cases were again a fortnight ago adjourned that the report of the Somerset House authorities might be obtained. The result of the analysis there made agreed with that of the county analyst.

COFFEE.

At Rochdale, Sarah Ellen Smith, 13, School-lane, Rochdale, appeared in answer to a summons issued at the instance of Thomas Whiteley, inspector of nuisances for the borough, and charging her with selling as coffee an article which was not of the nature, substance, and quality demanded by the purchaser. The Deputy Town Clerk said that on Friday, May 28, an inspector went into the defendant's shop and asked for a quarter of a pound of coffee. He was then served with the article forming the subject of this prosecution, for which he paid 4d. It was afterwards divided into three parts, one of which was forwarded to the public analyst. The analyst's report showed that the article was composed of 65 per cent. of coffee and 35 per cent. of chicory. The proceedings were taken under section 6 of the Sale of Food and Drugs Act, 1875. He did not regard the case as a very serious one. James Lee, assistant-inspector, in cross-examination, said he also purchased some pepper and butter, which were sent to the analyst. There was a label on the canister from which the coffee was taken, but he did not read the writing upon it until after the purchase was made. One of Mrs. Smith's daughters appeared after he had been served, and told the girl who had served him that what she had sold was a mixture of chicory and coffee, and that she ought not to have sold it as pure coffee. Thomas Whiteley, the inspector, gave corroborative evidence. Mr. Hudson, in defence, contended that if he could show that the person summoned had no guilty knowledge with regard to the adulteration, there was no offence, and that if the inspector saw the label on the canister before the sale there could be no conviction. At the time of the sale Mrs. Smith was away at Blackpool, and she had left her daughter Emma in charge of the shop. The daughter, who served the inspector, knew nothing about the things in the shop, and she ought not to have been serving at all. He submitted that the defendant, being absent and knowing nothing at all about the transaction, could not be held to be guilty. She had an india-rubber stamp with which she stamped all packets of coffee and chicory sent out, and had the daughter she left in charge served the inspector, his package would have been stamped in the usual way. The case had arisen out of pure inadvertence. Evidence was given by the defendant and her two daughters. The magistrates decided that there had been a breach of the law. They did not, however, consider the case a very serious one, and consequently defendant would be fined only 1s. and the costs.

ANALYSTS AND VINEGAR.

THE Metropolitan Association deserve considerable credit (says *The Grocer*) for the way in which they have successfully defended the interests of two of their members recently. The Whitechapel Vestry summoned two of their members for selling as malt vinegar liquids which were stated to contain large quantities of "dilute acetic acid" as an adulterant. Both the vinegars were the produce of well-known and highly respected firms of vinegar brewers, and the official analyses created very great surprise. Messrs. Goodrich and Bull, the members who were summoned, are also highly respected traders, and an investigation of the facts by the Grocers' and Oilmen's Association led them to decide to defend their members vigorously. They determined to have independent analyses made by their own analyst, who pronounced them to be genuine. The Association thereupon intimated to the Vestry authorities the result of their analyst's certificates, and after further consideration the Vestry withdrew both summonses and paid the Association's costs in the matter. The cases aroused a very great deal of trade interest, and, had the

proceedings been continued, some interesting facts would no doubt have been elicited. We have little doubt that but for the intervention of the Association in the matter one at least of the two defendants, though perfectly innocent, might have been convicted. As it is, they have both been spared the annoyance and trouble of police-court proceedings. We recently referred to the good work the Association is doing, and this practical illustration should certainly cause the trade in the metropolis to give it more widely-spread support.

KENSINGTON'S "BLACK SPOT."

AGAIN we have the unpleasant duty of calling attention to the frightful death-rate occurring in Notting Dale—that "special area" at Notting Dale appropriately designated as the West End "Avernus." Instead of there being any improvement, facts seem to prove the reverse. This poor neighbourhood is composed of about five streets—Bangor-street, Crescent-street, William-street, part of St. Clement's-road and St. Katherine's-road. The death-rate of this special area, which has a population of some 3,700 people, in 1896, was exactly 50 per thousand. This, in all conscience, is extraordinarily high, but according to Dr. T. Orme Dudfield's report for the four weeks ending June 19 last, it has gone up to 66·8 per thousand. Comment upon these figures is unnecessary. They speak for themselves. During the same four weeks the death-rate in South Kensington was 11·9. A great comparison between two districts—the rich on the one hand and the poor on the other—in one parish and under the same sanitary authority! That this special area in North Kensington is inhabited to a considerable extent by an undesirable class of people cannot be gainsaid. There some of the scum of the metropolis is congregated. It is time that something drastic was done by the Kensington Vestry to improve a locality which is a menace to the surrounding neighbourhoods. When the death-rate reaches 66·8 per thousand it is certainly time the Vestry were bestirring themselves and endeavouring to remedy an evil which is a disgrace to their parish.—*The Indicator*.

WHAT ALE IS.

ERNEST GEORGE CHAPMAN, a licensed victualler, of 10, Cirencester-street, Harrow-road, was summoned, at Marylebone Police-court, on July 17, by the Inland Revenue for diluting his beer.

Mr. Hawkins, solicitor, was for the prosecution, and Mr. Biron, barrister, defended.

Samples of the defendant's mild ale were taken on May 11 at his house, and they were forwarded to Somerset House for analysis. Mr. Scurfield, one of the analysts, reported finding a dilution amounting to something under eight gallons in the barrel of seventy-two gallons, two gallons of the excess being accountable for by the finings put into it. The excess might have been waste beer or water; the indications were in favour of the latter.

The defence was that Mr. Chapman was ill at the time, and his barman, Mansell, not being accustomed to do the work, simply guessed at the quantity of waste beer he put into the finings tub. He did not put any water into it. In cross-examination the barman admitted that the waste from all the beers sold went into one tub, where the finings for the mild ale were kept, and it was worked off in that way. Messrs. Charrington, the brewers, supplied the defendant with finings.

Mr. Curtis Bennett said it seemed to him that the mild ale was the result of the leavings or refuse of all the other beers. The defendant would have to pay a fine of £15, with five guineas costs.

AN IMPORTANT MILK APPEAL CASE.

HEYWOOD v. WHITEHEAD.

THIS was a special case stated by justices for Lancashire who had dismissed an information under the Sale of Food and Drugs Act, 1875, against the respondent for selling skimmed milk as new milk.

Mr. G. Clay appeared for the appellant; Mr. Butterworth for the respondent, a farmer.

The appellant is the inspector under the Act. The evidence showed that the respondent was out on January 18 selling milk, carrying two cans, one on his right, the other on his left. A sergeant of police asked him for a pint of new milk from the can on his right. The respondent replied, "That is skimmed milk in that, and new in this," pointing to the can on his left. The sergeant then said, "I want new milk, so I'll have a pint out of that." The respondent served him without any comment and charged him one penny, which was paid. It was found after due analysis that the milk sold was skimmed milk. At the hearing the sergeant was asked by the presiding magistrate whether he expected to get new milk for a penny a pint. The sergeant replied that he asked for new milk and was prepared to pay whatever the respondent charged for it. Another witness was called who had for several years bought milk described as new milk from the respondent at 1½d. a pint. The justices were not agreed, one of them thinking that, as the respondent asked only 1d. a pint, the sergeant must have known that only skimmed milk was being sold. The other justice thought this was immaterial.

The Court, on July 9, took the latter view and sent the case back to the magistrates with an intimation that they should convict.

Mr. Justice Cave said that the point was unarguable. If the respondent's views were accepted, the seller would only have to cheat boldly enough and he would be sure to be right.

SUPPLYING PUTRID FOOD TO CHILDREN.

THE Manchester Jubilee Catering Company, Limited, were fined, on July 9, £5 and 10 guineas costs for supplying sandwiches and cake unfit for human food to the school children of Prestwich at the Jubilee Day Fête. There were upwards of 3,000 children present, and, when the refreshments were given out, it was discovered that the ham and beef were putrid and swarming with maggots, while the cake was thickly coated with mould. The matter created much indignation in the locality, and the prosecution was undertaken by the Urban District Council.

A WELL-MERITED PENSION TO DR. ARLIDGE.

Few living men have deserved better of mankind than Dr. Arlidge, and some of the indirect fruits of his valuable if unremunerative labours are now occupying the House of Lords in the bill to compensate workmen for accidents due to the neglect of employers. His admirable and thorough investigations into the diseases incidental to various trades have enabled many *poseurs* to gain the public ear, but we doubt if they brought aught but loss to their able author, whose work was times over carefully left unacknowledged.

We join our congratulations with the *Brit. Med. Jour.*, which sees "with satisfaction that a Civil List pension of £150 has been awarded to Dr. John Thomas Arlidge in consideration of his valuable labours in the cause of public health, and especially his investigation into the hygienic results of particular industries and occupations. Dr. Arlidge's services in this important department of preventive medicine have been conspicuous and long-continued, and date back for many

years. The industrial population are now reaping great advantages from his work, and indirectly the nation has profited. We sincerely hope that he will live long to enjoy this well-deserved recognition of his valuable exertions."

Such sensible and well-merited recognitions as this are a happy relief from the late scandals in awarding pensions.

THE ATTFIELD TESTIMONIAL.

IN England we make far too little of our men of mark, and our progress in recognising this is very slow. We always had great painters, writers, and scientists, but where are our statues of them? We look in vain for the public recognition of Gainsborough, Reynolds, Millais, Darwin, Tyndall, Huxley, Ruskin, Buckle, Dickens, and a host of other English worthies whose monuments ought to adorn London's public places, but do not. Our art and taste gives us a griffin at Temple Bar, and like vile atrocities which shame us as a nation. However stoical he may be, the man does not live to whom the just praise of his associates in science, art, or literature does not afford pleasure. On some points we have been at variance with Professor Attfield, but they were minor matters, and we do not forget that he refused to sell his honour, and prostitute science to serve the infamous purposes of the American Oil Gang. For conscience sake he, years ago, threw away the opportunity of being the highly-paid scientific adviser to the English emissaries of convicted American contrivers of arson and murder, and this before their true character was known. In his retirement he has the satisfaction of knowing that he carries with him the esteem of even those who bitterly differed from him on some questions. The *Pharmaceutical Journal* records how on July 10, in the presence of about 150 friends and old pupils, Dr. John Attfield, F.R.S., was presented with an illuminated autograph album in a polished oak casket, together with a silver tray and silver tea and coffee service, as a mark of esteem and appreciation of his long services in the cause of pharmaceutical education. The presentation took place in a spacious tent on the lawn at Ashlands, Watford, Dr. Attfield's charming residence, and the occasion was signalled by a garden party given by Mrs. Attfield. Soon after five o'clock, Mr. Charles Umney took the chair, and after referring at length to Dr. Attfield's long and successful career, he called upon Mr. John Moss, who sketched in considerable detail the progress of the movement which followed the announcement of the retirement of Dr. Attfield from professorial life. Sir Borradaile Savory also spoke, and the chairman then presented the testimonial, in the name of the subscribers, to Dr. Attfield, who was visibly affected as he expressed his appreciation of the compliment which had been paid him. Mr. MacEwan afterwards moved a vote of thanks to the chairman and secretary of the committee, on behalf of the subscribers, and this was seconded by Dr. Attfield and responded to by Messrs. Umney and Moss. After the presentation, photographs of the company were taken in the tent, and subsequently on the lawn.

We hope he will live long to enjoy the tokens of the esteem in which he is held.

ADULTERATION IN LEEDS.

THE report of Mr. T. Fairley, public analyst for the City of Leeds, states that during the quarter ending June 30, 1897, the samples received have been: Milk, 48; skim milk, 1; butter, 3; total, 52.

The sample of skim milk was adulterated with 21 per cent. of water as compared with the lowest quality of genuine skim milk.

One of the butters was found to consist of margarine, and another sample was adulterated with 80 per cent. of that substance. One butter contained an excessive quantity of water, viz., 17 per cent.; ordinary good butter does not contain more than about 12 per cent. of water, anything over that amount shows either deliberate fraud or careless making up.

Twelve of the milks were reported as of low quality, and were no doubt adulterated, but owing to the low standard adopted at Somerset House had to be passed as of low quality.

POINTS FOR TRADERS.

"BERMALINE" BREAD.

IT is unfortunate that the appeal in the Bermaline case has been given against Mr. Mills, Wolverhampton. This is greatly to be regretted in the interests of the trade (says the *British Baker and Confectioner*) and it imposes another grievance to those which the members already suffer under the Bread Acts. A few months ago, if a baker had been asked whether he considered Bermaline bread fancy bread he would have replied unhesitatingly that he did. The whole traditions and experience of the trade are that breads of the character of Bermaline have been considered fancy bread, and therefore did not require to be weighed when sold. The directors of Messrs. Montgomerie and Co., Ltd., have in this matter put themselves forward as defenders of the interests of the trade, and for the plucky fight which they have made they are deserving of the gratitude and recognition of the baking trade. Mr. Montgomerie undertook, in the event of any of his customers or agents being prosecuted for selling Bermaline bread otherwise than by weight, to carry the case as far as he possibly could. When the first prosecution of Mr. Mills took place Messrs. Montgomerie were prepared to vindicate their position and appealed, but we are informed that the result of this case is that they cannot appeal to the highest courts, on the ground that the decision was given on question of fact and not on a point of law. The truth is that the more closely the Bread Laws are investigated the less satisfactory they become, and the more persistency with which they are enforced the more ludicrous becomes the position of the law. As we have pointed out over and over again, the trade does not wish to defraud the public, but it considers that its interests ought to be safeguarded in the same fashion. Notwithstanding the mass of evidence which was called, including some of the best-known practical bakers and experts in the trade, as to the practice in the sale of Bermaline, and the peculiar methods and ingredients which were calculated to make bakers consider that Bermaline comes under the category of fancy bread, the judgment has been given against the seller. The judgment of the Recorder is perplexing and disastrous. In summing up he said that the constituents of the bread were not so much to be considered as what took place at the time of the sale. The purchaser did not ask for fancy bread, nor did he ask for Bermaline bread; he simply asked for a white loaf and a brown one. The Recorder held that it rested upon the baker to show that Bermaline bread was sold under the denomination of fancy bread, and that he had failed to do.

This is a very important case, and far-reaching in its effects upon all engaged in the sale of what have hitherto been regarded as fancy breads. Now that the Wolverhampton Inspector has opened a campaign there is little doubt that other traders will find themselves brought within the meshes of the law over other fancy breads.

PARAFFIN WAX IN SWEETS.

AGAIN we have to record the case of a retailer victimised by a wholesale maker of confectionery. It is a

pity that the manufacturers cannot be "got at," and that our laws do not enable magistrates to imprison such persons without the option of a fine, as it is about two years since the attention of makers of confectionery was publicly called to the dangers of this practice.

At Wirksworth, on July 13, 1897, Henry Gambles, Wirksworth, grocer, was charged with selling to the prejudice of the informant, four pennyworth of "sugar cigars," which were not of the nature, substance, and quality demanded, in that they contained at least three per cent. of paraffin wax, on April 26 last.—Captain Henry Stair Sandys, the Inspector of the Food and Drugs Act for the Derbyshire County Council, prosecuted.—Mr. Clifford, of Briggs, Clifford, and Pinder, solicitors, of Derby, appeared in support of the prosecution.—Defendant, in reply to the charge, said he was quite ignorant of the fact they did contain paraffin wax, and he had not seen previous prosecutions.—Mr. Clifford said the proceedings were taken under Section 6, and the defendant was liable to a penalty of £20. Paraffin wax was one of the most dangerous things anyone could swallow, because it melted at 123 deg. Fahr., and the body was 98.4, and the result was this matter would not digest, and a death had occurred in Birmingham. He had the County Analyst there, and he would prove the quality of the "cigars." They wished that this kind of sweets must not be sold, and the defendant had no defence in law by pleading ignorance. Captain Sandys said he was inspector for the Southern Division of the County, and on April 26 he purchased 4d. worth of sugar cigars from Mrs. Gamble. There were eight of them. He took the usual course with them, and handed them to the Analyst.—Defendant said he knew that since the prosecutions the firm had ceased making these cigars.—Mr. John White, County Analyst for Derbyshire, produced the certificate. He had analysed the cigars, and they contained at least 3 per cent. of paraffin wax. It might create obstruction of the bowels and inflammation; such cases had been known. He showed that the wax was similar to candles. It melted at 122 Fahr., but it had been treated with sulphuric acid and strong potash, and gastric juice would have no effect upon it whatever. The treatment had no effect on the wax under the operation. The wax was used to coat the article. He took it it was coated to make it keep better.—In reply to the Bench and Mr. Clifford, he said a piece of indiarubber would digest quite as soon as that wax.—By the defendant: $1\frac{1}{2}$ per cent. was found in a previous case, but none as high as 7 per cent.—By the Bench: There was 4 per cent., and this was the highest case.—Defendant said he discontinued selling at once after hearing the result of the analysis. Defendant added that he had a box left, and he returned it to the makers. He had been told to get a guarantee as to purity before purchasing. This he did after Captain Sandys told him that.—The Bench: You had not a guarantee with these?—Defendant: No, sir.—Mr. Clifford, in reply to the Bench, said he left the penalty with the magistrates. It would be a defence if the defendant had a warranty. He could recover from the manufacturers, but the Bench had no power to touch them, although they were, as the Chairman said, the people they would like to get at.—Defendant said he would be careful in the future as to the sale of these articles.—The Bench decided to impose a fine of 2s. 6d. and costs £1 19s. 6d.—altogether, two guineas. The Chairman said they made the fine smaller because the costs were heavy. They were very glad he had discontinued selling these cigars, as it might have proved a very serious thing indeed. He should take care to get a guarantee in the future.—Defendant said he would do so.

ICE CREAMS.

The Star has called public attention to the fearful and wonderful nature of the ordinary ice cream of the streets, made in filthy places and swarming with matters which proclaim its verminous origin.

The Caterer says the making of ice cream in five minutes is no longer a dream of the overworked caterer or the devoted materfamilias. It has become a tangible possibility, thanks to the resource and enterprise of Messrs. Ebenezer Roberts and Co., Limited, the well-known manufacturing confectioners, of 264, 268A, and 270, Camberwell-road, London, S.E. By the introduction of the "Imperial" freezers and ice cream powders the desideratum is now within the reach of all. The freezer is—which we have previously had occasion to notice—a simple and ingenious little rotary machine, which possesses the distinguishing merit of only requiring to be kept clean to be prevented from ever getting out of order, while the ice cream powders place the ingredients for preparing the delicacies immediately at one's disposal at a cost of about sixpence a pint. The entire process is so simple that a child can accomplish it, and succeed just as completely as an experienced confectioner. We have experimented ourselves with freezer and powders, and can speak from practical knowledge. The system is one which should commend itself to professional and amateur caterers alike, for it is as economical as it is efficient. For bazaars and children's fêtes it should be very popular. At the recent bazaar in aid of the National Refuges for Homeless and Destitute Children and the Training-ships *Arcthusa* and *Chichester*, at St. Martin's Town Hall, half-a-dozen of the "Imperial" freezers were in use, and with them H.R.H. the Duchess of Albany made three quarts of ice cream, which was readily retailed at a sovereign and half-a-guinea apiece.

It would be a boon and a sanitary advance if Messrs. Roberts could bring this class of pure ices into the highways and reduce the sale of the dangerous and disgusting products of Saffron Hill.

In the United States the soda fountain and ices form a large part of the business of the pharmacist. In our opinion, it would be not only advantageous to the pharmacist, but it would distinctly benefit the public if the soda-water fountain and its multitude of tasty and cooling drinks could be found generally in England during such weather as we are now enduring. This is the sort of ice cream the poor are now buying.

At the Cardiff Police-court, A. Corsi appeared before Mr. Stipendiary Lewis, at the instance of Mr. Vaughan, chief sanitary inspector, on three charges of having neglected to keep his premises, 19 and 20, Sandon-place, used as a common lodging-house, in a clean and fit condition. Defendant pleaded not guilty. He said his house was cleaned every day, and denied that the persons residing in his house were lodgers; they were his own people, and employed by him. Mr. Vaughan proved that Corsi was registered as a lodging-house keeper, and had received a certificate as such. They had tried to get defendant to keep the place clean, but he would do nothing. The premises were in a filthy condition, and the yard was covered with animal refuse, yet there were lodged at the place a number of organ grinders and ice-cream vendors, and ice-cream was made there. Dr. Walford, medical officer of health, also spoke as to the filthy condition of the place. The Stipendiary said he was satisfied that the yard was in a dirty and unfit condition for the manufacture of any article of human food. Defendant was liable to a penalty of £5 and costs, and a continuing penalty of 40s. per day. However, he would not impose the continuing penalty. Under the first summons defendant would have to pay a fine of £5 and costs, or go to prison for one month. The other two summonses were withdrawn.

At the Islington Coroner's-court, Dr. Danford Thomas, coroner, held an inquest on the body of Emily Leitch, aged eight years, lately living with her aunt at Blundell-street, Islington. The aunt of the child stated that a few days ago the child had some hokey-pokey, and it appeared bad, and directly afterwards the child

was seized with indigestion, and a doctor said the hokey-pokey had poisoned her. She died two days later. Dr. John Foster, of 404, Caledonian-road, stated that he attended the child, which died on Friday. He had been informed of the hokey-pokey, and a post-mortem examination showed that the cause of death was due to poisoning, which he attributed to the hokey-pokey, which was probably bad. Mrs Morton, the aunt, recalled, said the ice was bought in the street, and no trace could be found of the man from whom it was purchased. The jury returned a verdict of Death by Misadventure. The coroner said he had heard that this ice was not infrequently stored under beds and such places at night. Ultimately the jury added a rider suggesting that the vendors should be placed under strict inspection. It is about time they were.

THE WEIGHTS AND MEASURES (METRIC SYSTEM) BILL, as now published, is identical in substance with the Bill of 1896, but is shorter and simpler in form, and as the table of metric equivalents is merely a matter of calculation, it has been thought unnecessary to schedule it to the Bill. The latter provides that, notwithstanding anything in the Weights and Measures Act, 1878, the use of a weight or measure of the metric system in trade shall be lawful, and nothing in Section 19 of that Act shall make void any contract, bargain, sale, or dealing, by reason only of its being made or had according to weights or measures of the metric system, whilst a person using or having in his possession a weight or measure of the metric system shall not by reason thereof be liable to any fine. It is proposed that the Board of Trade standards which may be made under Section 8 of the Weights and Measures Act, 1878, shall include metric standards derived from the standard metre and standard kilogramme deposited with the Board of Trade; and, further, that it shall be lawful for the Queen, by Order in Council, to make a table of metric equivalents in substitution for the table in Part I. of the Third Schedule to the Weights and Measures Act, 1878, whilst as from the date at which the Order in Council comes into operation, Part I. of the said Schedule and Sections 18 and 38 of the said Act shall be repealed.

A CHANCE FOR A LAMP INVENTOR.

Here is a golden opportunity to the man of inventive mind to gain fame and fortune. The French Academy has offered a prize of 100,000 francs to the inventor of a cheap lamp which will burn denaturalised spirits with a flame. The offer is intended to aid in the substitution of spirit lamps for those using kerosene in France. Spirit lamps were once in common use in that country, but have gone gradually out of use with the increased supplies and lowering prices of petroleum. The spirits were obtained in France, as in most countries of Europe, by distillation from surplus crops of potatoes, and corn is similarly used. It is obvious, says the *Paint, Oil and Drug Review*, that the invention of a spirit lamp cheap enough in first cost and running expenses would help out the French peasant as well as the distillers.

CO-OPERATIVE COCOA REVELATIONS.

At the Wolverhampton Police-court, on July 17, the Wolverhampton and District Co-operative Society, Stafford-street, Wolverhampton, were summoned before Messrs. Newnham and Lewis for selling as cocoa and allspice articles which were not of the nature, substance, and quality demanded.—The Town Clerk (Mr. H. Brevitt) prosecuted, and Mr. J. Keeble (Wynne, Baxter, and Keeble, London) defended in the allspice case, and Mr. W. C. H. Cross (Bristol) in the other.—Mr. H. Brevitt said that on May 8, Mr. Allwood, the local inspector under the Food and Drugs Act, sent his servant, a girl named Flannagan, to the defendant's

shop, and she ordered goods to the value of 8s. 3d. They were sent to his address, which was also that of Mr. Allwood, and when they were delivered the society's employé was told that the goods had been purchased for the purposes of analysis, and they were divided in the usual way. The articles were submitted to the borough analyst (Mr. W. E. T. Jones), who certified that the article sold as cocoa contained 31 per cent. of cocoa, 44 per cent. of sugar, and 25 per cent. of farina. Sixpence had been paid for half-a-pound of it, though cocoa nibs could be purchased at the rate of 1s. 1d. and 1s. 2d. per pound. When Flannagan asked what cocoa it was that would be supplied, she was told it would be "nutritial cocoa." The article was sent in a packet bearing a label on which were the words "Nutritial cocoa," and there was also a printed statement, "It is prepared from plants of the finest growths of the cocoa bean from which the indigestible shell has been carefully removed, together with the necessary proportions of other highly nutritial substances required to obtain solubility." The Town Clerk, continuing, said it was not contended that sugar, farina, or starch were injurious to health, but that they were not required for the preparation of the article, and were added to fraudulently increase its substance. When the allspice which Flannagan bought was analysed it was found to be devoid of allspice, and was made up of cassia and other spices.—Flannagan then gave evidence, and it transpired that the goods were ordered on a Saturday, and they were not delivered until the following Monday.—Mr. Cross contended that, according to the terms of the Act, notification that the goods were being purchased for analysis should have been given at the time of the purchase. He also pointed out that the notification was given to an irresponsible person—the vanman.—Mr. Keeble raised the same objection, and said that as the Act had not been complied with the prosecution must fail.—The Town Clerk held that the sale was not completed until the delivery of the goods, when notification was given.—The Magistrates' Clerk (Mr. E. H. Thorne) said the Bench would reserve their decision on this point.—Addressing the bench on the charge with regard to the cocoa, Mr. Cross held that cocoa nibs were not a commercial cocoa at all, and what the analyst termed starch was arrowroot flour, which was an article of food of some value. Cocoa for drinking purposes had been prepared in this way for a number of years. It was not a form of adulteration, but a *bonâ fide* mode of manufacturing drinking cocoa. The label, he also contended, was sufficient to show that the article was a mixture, and that it took the case out of the category of fraud.—Mr. Keeble also explained that round the allspice tin there was a label in colours stating that the contents were "genuine mixed spice."—William John Anson, grocery manager for the society, stated that he told Flannagan that they only kept one kind of pudding spice, and she elected to take the "genuine mixed spice."—For the defence, Mr. Edward William Greening, the manager of the London Productive Society, Limited, and the manufacturers of the cocoa, were called. He said the society had made the "nutritial cocoa" for ten years. It was a skilled preparation, and the sugar and farina were not put in to increase the bulk, or with any fraudulent intention. The "starch" used was arrowroot flour, and the added sugar enabled the cocoa to be more readily prepared.—In cross-examination, the witness said "nutritial cocoa" could be sold much cheaper if inferior cocoa was used.—Mr. E. W. T. Jones gave rebutting evidence. He said from his analysis he had come to the conclusion that "nutritial cocoa" was really chocolate-powder, and the title was misleading. There was 15 per cent. of sugar natural to cocoa, and he did not think either sugar or starch, which were not nutritious, should be added.—The case was adjourned for a fortnight, for the magistrates to consider their decision.

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Food & Sanitation

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CAUTION !!!

TAKE NOTICE that on the 6th day of July, 1897, the House of Lords (**The Lord Chancellor, Lord Watson, Lord Herschell, Lord Shand, and Lord Davey**)

UNANIMOUSLY AFFIRMED

the Judgments of Mr. Justice Stirling and the Court of Appeal in the Case of **POWELL** (trading as **Goodall, Backhouse & Co.**) *v.* **THE BIRMINGHAM VINEGAR BREWERY CO., LIMITED**, and dismissed the Appeal of **The Birmingham Vinegar Brewery Co., Limited**, from such Judgments with costs in favour of **Goodall, Backhouse & Co.**

Dated this 8th day of July, 1897.

J. SEYMOUR SALAMAN,
65 and 66, CHANCERY LANE,
LONDON,

Solicitor for **Messrs. Goodall, Backhouse & Co., Leeds.**

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Food and Sanitation.

SATURDAY, JULY 31ST, 1897.

HEALTH RESORTS III.—DOVER.

THE dangerous character of many foreign places resorted to by invalids and pleasure-seekers has often been demonstrated, but the tide of fashion and want of thought still send thousands to Continental alleged health resorts which are, in reality, plague spots.

Madeira was long ago shown to be, from a sanitary point of view, a place to be avoided. The British Consul reported last year:—

"I have no hesitation in saying that persons visiting Madeira run a very serious risk of infection; this is

entirely due to the bad water supplied to the town." After speaking of the typhoid epidemic, he goes on: "After much delay the municipal authorities had the water from every fountain analysed. The result was somewhat alarming, as it was found that only one fountain in the town contained water fit for consumption." One well under the Government House, which supplied a large number of people with drinking water, was proved to be polluted by the sewage matter of two adjacent cesspools, which had not been cleared out for years!

Many of the towns in France are in a wretched sanitary condition. It is not yet forgotten how a young actress, well known in French theatrical circles, contracted typhoid fever and died just after a holiday spent at Trouville.

Florence is in a sanitary state which, if known, is not calculated to entice English visitors. People who can afford high-priced table waters do not suffer from typhoid fever, but the disease is ever rife in the poorer quarters.

Mentone, forty years ago, was a healthy village in France, where lived peasantry happy in their farms and their superb physical state, conditioned by the climate. It was discovered that the region was a most healing climate for consumptives, and it became the Mecca for the unfortunates of Europe so stricken. The inhabitants abandoned their farms to wait upon the strangers. The strong, healthy women forsook their dairies and became the washerwomen of the consumptives' clothes. No precautions were taken; the disease was not then understood as now, the theory of the tubercle bacillus not having been discovered. The place to-day is bacillus ridden, a pest-hole, death itself. The hitherto strong inhabitants are emaciated, a coughing, bleeding people, filled with the germs of consumption. The soil and the air are both contaminated with them. It is no longer a resort. The same fate, it is believed, awaits many other similar health resorts unless active means are taken to destroy all germs. This will be a most difficult task, because consumptives themselves, as a rule, are not thoughtful of the danger they spread, or of the rights of others. They should bear in mind that if all others had been careful they, too, might have escaped.

It has always been a mystery to us why so many thousands of our wealthy people flock to filthy foreign "health," etc., resorts, when England, Ireland, Scotland, Wales, the Isle of Man, and the Isle of Wight are really unknown to them. We have baths, natural mineral waters, enchanting scenery, excellent hotels and travelling accommodation in all parts of the kingdom. It would be worth the while of English medical men to study our native health resorts more and to encourage foreign ones less. Money spent in England goes to better England's prosperity, that spent abroad goes to equip an army or a navy that may one day be busy blockading or bombarding us, and the next be shooting us with the latest inventions in rifles bought by English money, foolishly spent.

How many of the thousands who cross from Dover to the Continent, for example, ever give a thought to the beauties and historical interest of their starting place? Every Briton has seen or heard of Dover's white cliffs, but that is all the average persons sees of Dover. Like many other charming home health resorts it has been neglected, although it would be hard to say why. Recently some public spirit has been aroused in the old Cinque Port, and attractions are now provided for visitors which should materially benefit the place. The latest is the charming Hôtel Burlington, an enormous building of 380 rooms, furnished and decorated more comfortably and tastefully than any hotel we have seen at home or abroad. It has a southern aspect, and is sheltered from north and east winds, and commands a splendid view of the English Channel. The sanitary appliances are Bolding's make, and are fitted in a

thoroughly workmanlike manner by Maple and Co. From the points of view of health and comfort there has been nothing left undone to merit the support of pleasure and health seekers. Dover has a low death-rate, freedom from such terrible evils as the visitor to Mentone, etc., braves, and deserves more recognition as a health resort that it has hitherto received.

THE DANGER OF PUBLIC ANALYSTS.

THE *Pharmaceutical Journal* has rarely had anything good to say of Public Analysts, and it would appear as though personal feeling on the part of some member of its staff is responsible for the following, which appeared in a recent issue:—

"The objects contemplated by the Food and Drugs Act are so much in accord with the efforts made in the same direction by the Pharmaceutical Society ever since its formation, that any failure in their realisation cannot be regarded otherwise than with regret by members of that body. But it is reasonable to expect that they will regard with a strong feeling of dissatisfaction ill-advised interference with the details of their business, by which individual chemists are subjected to the indignity of defending charges against them which have not reasonable foundation. Several instances of the danger that chemists may incur at the hands of public analysts have recently been reported in this journal, and another of still more noticeable character is reported in our issue of this week.

"The provision of the Act that the production of an analyst's certificate is to be sufficient evidence of the facts therein stated leaves room for the possible infliction of considerable hardship, unless the person charged with an offence is able and willing to do all that may be requisite for showing that the charge brought against him is unfounded. That proceeding involves so much trouble and expense that it may be thought preferable to pay a penalty undeservedly rather than enter upon the thorny path of defence in a police-court. In the case now referred to, however, such procedure has resulted in a dismissal of the summons after two hearings and some considerable anxiety and trouble to the persons concerned, though in a less satisfactory manner than might have been expected, on account of a remark made by the magistrates that they gave the defendant the benefit of the doubt. On that account it appears desirable to state the facts of the case somewhat more fully than would otherwise have been necessary.

"The analyst's certificate had rather a formidable appearance, as it set forth that the sample was 'deficient of its active principle, namely nitrous ether, containing only 1.36 parts per cent., whereas by the British Pharmacopœia it is required it should contain 2 per cent. of nitrous ether.' The certificate further alleged that the deficiency of nitrous ether amounted to 32 parts per cent. This somewhat paradoxical mode of stating the deficiency of the article had the effect of making the charge appear more serious, and it entailed no little trouble to make clear the fact that the analyst's statement really meant 32 hundredth parts of 2 per cent., or actually 0.64 part in one hundred parts of the sample analysed.

'But the most serious objection to the certificate was that the result stated in it was incorrect. In the first place the percentage of nitrous ether is not the proper mode of stating the result of the test by which the quality of spirit of nitrous ether is to be ascertained according to the British Pharmacopœia, and it is only an inference from the volume of nitric oxide gas yielded when the spirit is tested as the Pharmacopœia directs. Moreover, the analyst's statement that spirit of nitrous ether should contain 2 per cent. of nitrous ether was based on the erroneous assumption that a sample

yielding five times its volume of nitric oxide, under the conditions specified in the Pharmacopœia, would contain 2 per cent. of ethyl nitrite. As the weight of nitrous ether equivalent to 1 cubic centimetre of nitric oxide gas at 60° F. and 30" pressure is .003179 gramme, the quantity by weight contained in 1 cubic centimetre of the spirit yielding five times its volume of gas will be $.003179 \times 5 = .015895$ gramme, or 1.5895 gramme in 100 cubic centimetres. Owing to the difference between the specific gravity of the spirit of nitrous ether and that of water, 100 cubic centimetres weigh only 84.25 grammes, so that to obtain an expression of the percentage by weight 1.5895 has to be divided by the specific gravity—

$$\frac{1.5895}{0.8425} = 1.88 \text{ gramme.}$$

or otherwise stated—

$$\begin{array}{ccccccc} \text{grammes} & & \text{gramme} & & \text{grammes} & & \text{gramme} \\ \text{If } 84.25 \text{ contain } 1.5895, \text{ then } 100 \text{ contain } 1.88. \end{array}$$

Consequently the quantity of ethyl nitrite equivalent to a yield of five times the volume of gas is really 1.88 per cent. by weight, so that by making the standard too high an error of 6 per cent. was thus introduced.

"Then five volumes of gas is not, as stated by the analyst in his evidence, 'the absolute minimum quantity that spirit of nitrous ether should yield.' The Pharmacopœia says on the contrary, 'it should yield not much less than five times its volume,' so that—expressing the value in terms of nitrous ether—a sample containing not much less than 1.88 per cent. would be within the limits allowed by the Pharmacopœia. The percentage stated by the analyst, 1.36, would, perhaps, properly be held to be too low, but that figure again was the result of incorrect calculation, and of omitting to take into account the specific gravity of the spirit of nitrous ether, the determination of which the analyst considered to be unnecessary, though the omission fully accounts for the inaccuracy of the result stated in his report, as will be shown presently.

"In cross-examination as to the method of testing the sample, a fact was elicited which demonstrated the inaccuracy of the certificate. The analyst's evidence was to the effect that he obtained a volume of gas equal to 4.3 times its volume, and that result was not disputed. Calculating from that result the percentage of nitrous ether, as before, we obtain as the weight contained in 100 cubic centimetres—

$$.3179 \times 4.3 = 1.36.$$

That was the amount given in the analyst's certificate; but it represents the percentage of nitrous ether in 100 measures of the spirit in question, and, as shown above, to arrive at the correct percentage by weight, a further calculation has to be made, which gives the true result as below—

$$\frac{1.36}{0.8425} = 1.62 \text{ per cent.}$$

So that the actual deficiency of nitrous ether, as compared with a sample yielding five times its volume of gas, was much less than it was represented to be, or $1.88 - 1.62 = .26$, instead of .64 as stated by the analyst in his evidence. Greater part of the alleged deficiency of nitrous ether (32 per cent.) was made up of the errors above pointed out, and the true amount, stated in percentage, is 13 instead of 32.

"In fact, the only question to be decided in this case was whether three-tenths more than four volumes was 'not much less than five.' That, of course, left room for some difference of opinion, but it was contended for the defence, that—taking into consideration the liability of the preparation to undergo alteration and the latitude of the statement in the Pharmacopœia as to the quantity of gas it should yield when the vessel containing the spirit has occasionally been opened, as well as the

length of time that had elapsed before analysis—the sample came within the limits allowed.

"The magistrates, however, appeared to think that there was a difference of evidence as to the results of analysis, and they granted the application of the inspector of police to have the third sample sent to Somerset House for analysis.

"During the second hearing of the case a great deal was said by the solicitor acting for the prosecution as to the public duty of an analyst, but he did not appear to take cognisance of the fact that the due performance of that duty comprises regard for the interests of traders as well as for those of the public. Above all, it is essential that care and accuracy should be observed in the conduct of analyses which may become the basis for charges of infringing the provisions of the Act. In the case now referred to those necessary conditions were not fulfilled, and a chemist was arraigned before the magistrates as a malefactor without any sufficient reason, with the possible result of injury to his business. We do not suggest that such occurrences are frequently characteristic of prosecutions under the Food and Drugs Act; but there is too much reason for believing that the institution of proceedings should not be left altogether in the hands of chief constables, police inspectors and analysts, but placed under the control of some more competent authority so as to do away with the necessity for the merits of a case having to be fought out in a police court."

COST AND COMPOSITION OF MILK.

THE sale of milk by liquid measures, and without any reference to the composition and richness of the actual article bought, is the most unsatisfactory method we have for the purchase of any food. This has long been the opinion of all those, not actually connected with the trade, who have investigated the matter; laws and customs have, however, been too strong in the matter, and reform—a practical scheme, even—seems as far off as ever. A very valuable report on the subject has come to hand this week from the United States, in which the case against the present system is presented very clearly, and in a manner that ought to once again call attention to the subject, even if its further discussion does not lead to some workable scheme of reform. The report to which I refer is contained in the 17th Annual Report of the New Jersey State Experimental Station, and it deals with samples of milk purchased at random in the four largest cities of New Jersey during various periods of 1896. These samples were analysed at the experimental station, with this report on the cost and composition of milk as purchased for food as the result.

In all 102 samples were purchased, and these were obtained both from the wagons of the retailers and from their shops and were bought both in bottles and cans as left for consumers and in "own vessels." Everything was done to ensure that both the number taken and the samples themselves should be representative of that supplied to consumers by both large and small producers and dealers. The price paid was the same in every case, eight cents. (4d.) per quart, the price at which milk is invariably sold in all the large cities of the State. Practically these American prices are the same as those which prevail in London and our large cities, so that the comparisons made later on are easily applicable to this country. There is, however, a difference in the law relating to adulteration, as in most of the Eastern States no milk can be sold as "pure milk" unless it contains 3 per cent. of fat. Here the law fixes no limit, although the large milk buyers insert $3\frac{1}{2}$ per cent. as the minimum in their contracts with farmers.

Before dealing with the samples themselves, the

report deals with the initial difficulty of the problem to be solved—the fact that milk itself is not a product of fixed composition; that "both the amount and the proportion of the constituents contained in it are influenced by a variety of conditions, the chief of which are, perhaps, the individuality of the cow, her breed, food, age, and health, and period of lactation, though the time and season of milking are also influencing factors." But although all this is true, it is pointed out that we know very well what quality milk ought to be when mixed from the produce of several cows, and that very lengthy investigation in that state had shown that normal milk contained 87.50 per cent. of water, and 12.50 per cent. of "total solids," and that these "total solids" ought to contain:—

| | | | |
|---------------------|-----|-----|----------------|
| Butter fat | ... | ... | 3.50 per cent. |
| Casein and Albumin | ... | ... | 3.57 " |
| Milk Sugar | ... | ... | 4.50 " |
| Ash (Mineral Salts) | ... | ... | 0.75 " |

12.50

This average composition "has served as the basis in both State and city governments for the enactment of laws or ordinances, the purpose of which is to prevent watering, skimming and other forms of adulteration." These laws, however, only require three per cent of fat, so that what must be regarded as the average quality of milk is always richer in fat than the limit fixed by the various laws.

This will enable the reader to understand that the value of richness of milk depends chiefly on the fat that it contains and in a secondary degree on the other total solids. With milk it is not the 87 to 91 per cent. of water that is bought or sold, but the 3 to 4 per cent. of fat and the 11 to 14 per cent. of "total solids," the character and value of which as food are determined by the fat. Judged by this standard the 102 samples of milk purchased in the cities of New Jersey were arranged in eight classes, in which the quantity of fat ranged from 2.84 lbs. in every 100 lbs. of the milk, up to 7.06 lbs. in every 100 lbs. The full details of the classification are as follows:—

CLASSIFICATION OF RICHNESS IN MILK SOLD AT SAME PRICES.

| Class. | Number of samples. | Total solids. | Percentage of | | Percentage of fat in total solids. |
|--------|--------------------|---------------|---------------|------------------|------------------------------------|
| | | | Fat. | Solids, not fat. | |
| 1 | 4 | 11.16 | 2.84 | 8.31 | 25.9 |
| 2 | 16 | 12.15 | 3.34 | 8.81 | 27.5 |
| 3 | 34 | 12.57 | 3.37 | 8.79 | 30.2 |
| 4 | 26 | 13.13 | 4.23 | 8.90 | 32.2 |
| 5 | 13 | 13.70 | 4.69 | 9.01 | 34.2 |
| 6 | 4 | 14.39 | 5.32 | 9.08 | 37.2 |
| 7 | 2 | 14.84 | 5.67 | 9.17 | 38.2 |
| 8 | 3 | 15.43 | 7.06 | 8.38 | 45.8 |

Average ... 12.97 ... 4.13 ... 8.84 ... 44.2

"Taking the average of the whole of these samples, it will be seen that the milk supply of these cities is extremely good, the percentage of fat being no less than 1.13 per cent. more than actually demanded by law; while the "total solids" are very nearly one per cent. over the legal requirement. But the great variation shown with regard to composition and richness "show at once that at a uniform price per quart there is a wide variation in the cost of the nutrients to the consumer." And the money value of this variation is given as follows:—

"Assuming that the quality of the nutrients, as represented by the 'total solids,' is quite as good in one class of samples as in another, the cost per lb. of total solids in Class 1, at the rate of eight cents. (4d.) per quart or four cents. (2d.) per lb., is 35 cents. (1s. 5½d.), while in Class 8 it is 26 cents. (1s. 1d.), or 38.5 per cent. greater in Class 1 than in Class 8. In other words, 100 dols. (£20 16s. 8d.) spent for milk of the

quality represented by the 8th class would purchase nutriment that would cost 138 do's. 50 cents. (£28 17s. 8d.) if purchased in the form of milk of the quality represented by Class 1."

But this is assuming what is not the case, as the larger the proportion of fat in the total solids the greater is the food value of nutrients, and it is very probable that a lb. of "total solids" containing 40 per cent. of fat would be worth purely as a nutrient, double the value of a lb. of "total solids" containing only 30 per cent of fat. The quantity of fat is, therefore, the better test of the value of milk, and this report, therefore, boldly declares that the selling value of milk should be determined by the percentage of fat, and that the fair prices should be:—

| Milk with 3 | per cent. of fat | ... | 3d. per quart. |
|-------------|------------------|-----|----------------|
| " 3'50 | " | ... | 3½d. " |
| " 4 | " | ... | 4d. " |
| " 4'50 | " | ... | 4½d. " |
| " 5 | " | ... | 5d. " |

Most elaborate figures are given to show that the above represents the true money value of the variants in milk of the different qualities, except that I have expressed it in pence instead of cents., taking the latter as being worth one-halfpenny. That it provides a really practical solution of a difficult problem depends very much upon the attitude of "the trade," but that it is possible of application is certain. By means of excellent milk testers the quantity of fat in milk can be determined in a very few minutes anywhere. With this, there ought to be no difficulty in selling milk according to its actual food value, and according to the amount of richness it actually contains.

To secure this, this scheme sent out by the New Jersey Experimental Station is the best that I have seen. It is based on the fact that milk is a food, and that its food value consists absolutely in its "nutrients" and richness; that all milk containing less than 3 per cent. of fat is of so low a nutritive value and so much below what normal milk should be, that its sale as whole milk should be prohibited, and only permitted as skimmed milk; and that the true value of milk sold for food and containing 3 per cent. of fat or over, is one penny per quart for every one per cent. of fat. It is a simple scheme and one worthy of attention. One thing is very certain, and that is that our present system of selling milk by quantity, and without any regard to quality, is most unfair to both the consumer and to the producer of good milk, and that reform on the matter is most urgently needed.

AMERICAN PORK.

At Guildhall, London, James Moore, meat salesman in the employ of Messrs. Hartridge and Swain, 155, Central Market, was summoned for selling to H. A.

Mitchell, of 602, King's-road, Fulham, eleven loins of pork that were totally unfit for human food. Mr. R. D. Muir prosecuted, and the defendant was represented by Mr. Ricketts. Mr. Muir explained that the defendant, in his capacity of salesman, assured the complainant that the pork was good, but on the box which contained it being opened the meat was found to be putrid. Mr. Spriggs deposed that on the day in question he saw the loins of pork at Mitchell's premises; they were very bad, and some were putrid. Dr. J. C. Jackson, medical officer for Fulham, said the meat was decomposed and perfectly unfit for human food. Mr. Ricketts said it was no part of his case to prove that the meat was good. What he should show was that the defendant did not know that the meat was bad. It was American pork, and was packed in boxes. If it was bad when the boxes were opened the person who sold them would return the money. That was the custom of the market. The defendant was called, and said he had been in the employ of Messrs. Hartridge and Swain for two years; they did a considerable business in American pork. These particular boxes were bought on the morning of May 15, from the cold stores of the East and West India Docks. They were frozen. The defendant was cross-examined by Mr. Muir with a view to showing that he had that morning several other bad pieces of pork. Henry Swain (Messrs. Hartridge and Swain), stated that pork, like other meat, would keep any length of time when frozen. Sometimes some loins would be good and some bad. Mr. Muir called rebutting evidence. J. A. Hallam, butcher, Well-street, Camberwell, said on May 14 he bought some loins of pork of Harry Hart, who was in the same employ as defendant; when it arrived home it was putrid. The next time he went to the market he spoke to Hart, and Hart referred him to Moore, who said he was sorry, and gave something in the place of the bad stuff. C. J. Chasby, butcher, Clapham Junction, deposed that he bought some pork of the defendant on May 14. He said to defendant, "I don't want any of that thawed-out stuff, because it will stink before I get it home." It was sent home, and the meat was bad. He spoke to defendant, and he said, "All right, I'll allow for it." Eventually the summons was dismissed.

SIDE LIGHTS ON SAUSAGES.

At Lambeth Police-court, on July 22, Mr. C. Owen, goods manager to the London and South-Western Railway Company, was summoned at the instance of Inspector Farmer, on behalf of the Camberwell Vestry, for carrying offensive matter through Grove-lane, Camberwell, during prohibited hours. There was also a summons against one of the company's carmen, a man named Watts, arising out of the same matter. Mr. G. W. Marsden appeared in support of the summons. Mr.

"KURRUWA"

(This word is Registered, and used as a Trade Mark for Best Quality Articles only, and has now become synonymous with quality for the following specialities.
"We are of opinion that all the products bearing the guarantee of this name may with equal justice receive our highest commendation."—*The Family Doctor*.)

"KURRUWA" DELICIOUS, SOLUBLE COCOA.

Manufactured in England on the popular Dutch principle.
ANALYTICAL REPORTS.

"The Laboratory, Bow and Bromley Institute, London, E."

"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average."

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skillful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,
"Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London;
Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions,
London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8.
This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

Please ask your GROCER or CONFECTIONER for these specialities, see that they are marked "KURRUWA," and, if you cannot obtain them, write direct to
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"KURRUWA" CHOCOLATE ALMONDS.

"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*."

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

H. Avory, who represented the company, did not dispute the facts. The company were in ignorance of the bye-laws of the County Council under which the proceedings were taken. The company were helpless as to the stuff that was sent to them to carry, and it appeared that this particular stuff was something used for making sausages. (Laughter.) It was sent up from the country, and arrived at Nine Elms at night. The company were, of course, obliged to get rid of it from their premises. If they had not carried it away they might have been summoned for having a nuisance on their premises. About ten o'clock the next morning it was sent out by one of their vans, and on the way the carman was stopped. It was undoubtedly offensive matter. He was instructed to say that the company were now making regulations which would prevent a breach of the Council's bye-laws in the future. Mr. Sheil fined Mr. Owen 40s. and costs. The carman was fined 1s. and costs.

A NEW PUBLIC ANALYST.

THE X rays of Röntgen have been experimented with to detect adulteration in food. Some coffee was photographed recently by the medium of the rays, and various adulterations of dried beans and other materials were discovered. Pepper was also shown in the same manner to be adulterated with powdered cement, and the difference between fresh tea leaves and leaves that had already been infused was very clearly marked in the photographic plates. This new application of the rays opens up an immense field, and the result is likely to be extremely useful, says a Paris correspondent of the *Daily Mail*. Whether this will produce a slump in analysts remains to be seen.

MILK.

AT Westminster, on July 21, Einion Williams, of 14, Artillery-row, Westminster, a Welshman, describing himself on his bill-heads as purveyor to her Majesty's Brigade of Guards, was summoned by the Westminster Vestry for selling butter adulterated with 40 per cent. of foreign fat.—Mr. Percy Gates, solicitor, prosecuted for the Vestry, whose inspector, Mr. Kirk, employed a little girl to purchase, for sevenpence, half a pound of butter at defendant's shop. Mrs. Williams served the child, and according to the evidence, directly she caught sight of the inspector she snatched the butter from the girl's hand and walked to the back of the counter. Mr. Kirk followed her, and, using slight force, got the butter that had been served, though part of it had been thrown into a receptacle under the counter.—Mr. Ricketts, who defended, said he was instructed that there was no sale, and that the Inspector most improperly went to the back of the counter, and helped himself from the slab, mixing up the sample analysed from the margarine and butter tubs.—Defendant's wife, who professed she could not speak a word of English, and had her evidence in Welsh interpreted, gave this version of the affair on oath.—Mr. Marsham said he did not believe it. The sale was clearly proved.—Mr. Gates said the defendant had been twelve of thirteen years in the shop, and when he was committed and fined 40s. two years and a-half ago for adulterated milk, the same line was adopted—that the Welsh wife did not understand English. Defendant was a Government contractor.—Defendant: I only put that on the bills because I serve the Guards with milk.—Mr. Marsham remarked that a summons might have been issued for obstructing the Inspector. Defendant must pay a fine of £5 and the costs.

THE DANGERS OF TINNED FOOD.

DR. J. F. J. SYKES, Medical Officer of Health, St. Pancras, in a report just issued, says that "the reason

tinned foods so frequently cause trouble when eaten, especially if they have been kept open a few hours during the hot weather before consumption, is that so much of the tinned foods in the cheaper markets are derived from old ships' stores. A ship upon sailing lays in certain stores of tinned foods. It often happens that these are not touched on the voyage, and they may go another voyage or not, but ultimately they are sold as old stores. The tins are then cleansed, re-coloured, re-varnished, and re-labelled with clean fresh labels and resold. So again and again quantities of tinned foods may be re-sold year after year, and some of these come upon the general market and are sold in seaport and inland towns. Considerable quantities must find their way on to the London markets and be retailed by small grocers in the poorer neighbourhoods. This is a risky condition of things that only requires public attention to be directed to it in order to evoke some remedy. In addition to the liability of causing sickness, very stale tinned foods cannot possibly be so beneficial as nutriment; in fact, in the course of years much of the proper dietetic effect must be lost. The remedy that suggests itself to me as effectual is to provide by law that all tins containing tinned food shall have stamped upon the bottom the date of tinning."

LORD RAYLEIGH'S MILK.

LORD RAYLEIGH was summoned at Bow-street, on July 21, for selling milk from which at least twenty per cent. of fat had been removed.—Mr. H. C. Jones supported the summons on behalf of the St. Giles's Board of Works.—Mr. Ricketts, jun., defended, and stated that the shop at which the milk in question was purchased—12, Great Russell-street—was not kept by Lord Rayleigh. In fact the wrong person had been summoned.—Formal evidence having been given as to the purchase of the milk, Inspector Robinson said Lord Rayleigh's name appeared over the shop and on the milk trollies. He asked the manager to whom the shop belonged, and he replied, "Lord Rayleigh."—In reply to Mr. Ricketts, witness said the shop was known as "Lord Rayleigh's dairy." He did not know as a fact that the Hon. Ed. Strutt (Lord Rayleigh's brother) was the rated occupier.—Mr. Buckoke, the manager of the shop, stated that the rent and rates were paid by the Hon. E. Strutt, and the milk sold came from Lord Rayleigh's farms in Essex.—Mr. Jones: Is it not a fact that this is Lord Rayleigh's business, and that the Hon. Ed. Strutt is his manager?—Witness: I do not know that. The Hon. Ed. Strutt has an office at 21, Finsbury-circus.—Mr. Jones: There is more than meets the eye in this. It is a juggle.—Sir James Vaughan: It is a matter of great importance that the quality of the milk should be good, whether the shop belongs to Lord Rayleigh or to Mr. Strutt. Under the circumstances I think the summons should be withdrawn.—Mr. Jones: Our analysis shows that twenty per cent. of fat was abstracted. According to my friend's analysis water was added.—Mr. Ricketts: Many samples have been taken, but this is the only complaint made as to the quality of the milk sold at this shop.—The summons was withdrawn.

METALLIC CHEESE.

METALLIC cheese is a discovery of the public analyst of Sheffield. It is a compound liberally fortified with crystallized sulphate of zinc, which enables a "round" of cheese to preserve for a long period a fresh and youthful complexion, no unsightly cracks and swellings appearing on its surface to excite the suspicions of timid buyers. The zinc preparation is known in the trade as cheese spice—a title as little warranted as it would be to call a handful of tin tacks shrimp sauce or salad

dressings. It appears that in Canada—where the filled cheese comes from—it is the practice of unscrupulous dealers to use metallic lead for the above purpose—a fact to which attention has also been directed, and which should prove especially interesting to people anxious to avoid a heavy diet. It is refreshing, says the *St. James's Gazette*, to find the local authorities in the provinces tracking down the ingenious adulterator in this spirited fashion.

ADULTERATION IN DERBYSHIRE.

MR. JOHN WHITE, F.I.C., Public Analyst to the County of Derby, reports as follows:—

I have the honour to report that during the quarter ending June 10th, 252 samples of Food and Drugs were submitted to me for analysis as follows:—

Sixty by Captain Sandys, 62 by Colonel Shortt, 64 by Mr. Shortt, and 66 by Inspector Hewitt.

The samples consisted of the following articles:—

Butter, 70; Lard, 12; Condensed Milk, 4; Cheese, 1; Flour, 1; Coffee, 10; Tea, 1; Cocoa, 1; Sugar, 6; Oatmeal, 20; Arrowroot, 6; Pepper, 10; Mustard, 3; Ground Rice, 3; Jam, 1; Ground Ginger, 11; Sweets, 14; Whiskey, 28; Brandy, 2; Rum, 16; Gin, 3; Malt Vinegar, 2; Glycerine, 5; Linseed Meal, 2; Olive Oil, 1; Tincture of Rhubarb, 6; Cream of Tartar, 5; Precipitated Sulphur, 4; Bicarbonate of Soda, 3; Tartaric Acid, 1;

Of the 70 samples of butter, only two proved to be adulterated. These samples did not contain any foreign fat, but the proportion of water present was in my opinion excessive, the respective amounts being 18.5 and 19 per cent. Proceedings were instituted against the vendor of the latter sample, and a conviction was obtained.

Four of the ten samples of coffee had been adulterated with chicory, the amount added varying from 35 to 80 per cent. The sample containing 80 per cent. of chicory was described as "French coffee, prepared in England"; the label on the tin further stated it to be "a mixture of choice coffees with the best Belgian chicory, purity and quality guaranteed." Another sample sold as a mixture contained 80 per cent. of chicory, and this was described as being "blended with the finest chicory." There can be no doubt that even when such stuff as this is sold as a mixture and at the low price of 10d. or 1s. per lb., the purchaser is grossly defrauded. He gets an article that is comparatively worthless, but is led to believe by the wording of the label, and by the fact that he obtains a strong tasting and black liquid from the mixture, that he is getting very good value for his money.

An extremely mischievous form of adulteration, and one moreover which is new as far as this county is concerned, has been detected during this quarter. I refer to the coating of various kinds of sweets with paraffin wax. Special attention should I think be called to this matter, as it is a phase of adulteration likely to be attended by direct injury to the health of young children. Of 14 samples of sweets submitted, three contained paraffin wax, the respective amounts present being 1.5, 3 and 4 per cent.; these sweets were described as chocolate chumps, sugar cigars and chocolate cigars. These articles represent the cheap varieties of sweetmeats, and are such as would be bought by the children of the industrial classes. It is difficult to imagine any form of adulteration more dangerous to the health of the community than this; paraffin wax is absolutely indigestible, and when eaten undergoes no change in the stomach. The wax is indeed unaffected by strong mineral acids or alkalis even when boiled. The temperature required to melt the wax is about 120°F., while the normal temperature of the body is 98.4°F., consequently the wax is not melted in the stomach, but is merely softened slightly. It may possibly then pass into the intestines, where it may either cause inflam-

mation or create an obstruction. A case is recorded of the death of a child from the consumption of sweetmeats containing this wax.

One sample of mustard contained at least 5 per cent. of wheaten starch.

¶ Nine samples of spirits, viz., 5 of rum and 4 of whiskey, proved to be adulterated by means of an improper addition of water, the alcoholic strength of the samples varying from 26 to 31 degrees under proof.

Of the 26 specimens of drugs submitted to me, only three samples of tincture of rhubarb proved to be adulterated. Two of these were so weak as to be practically worthless; both were devoid of saffron and deficient of 20 per cent. of proof spirit, and one contained 60 per cent., and the other 15 per cent., less solid matter than should have been present.

The whole of the other articles were genuine, although four samples of oatmeal contained traces of barley.

The total number of adulterated articles was 22, which calculates out to a percentage of 8.7 as compared with 6.0, the figure for the previous quarter.

DISINFECTION BY VAPOUR OF PHENOLS.

In a thesis for the M.D. of the Victoria University (says the *British Medical Journal*) Dr. J. Mountfort Johnson, of the Owens College, Manchester, narrates certain experiments he has made to ascertain the values of the vapours of the carbolic acid group as germicides. "No. 5 carbolic" is said by the makers to consist almost entirely of cresylic acid, there being but a small percentage of phenol present. Dr. Johnson found that the vapour of 12 ounces acting for 16 hours in a room of 1,500 cubic feet capacity did not kill staphylococcus, bacillus coli communis, anthrax spores, or the bacillus of cholera. There was only inhibitory action. The bacillus of typhoid was the only one killed. The vapour of izal he found too heavy for disinfecting purposes in this way. In the "strength of 8 ounces to 1,500 cubic feet there is not sufficient penetration to even inhibit growth." The vapour deposits on glass as a fine film. When 12 ounces of cresol (commercially pure) were evaporated in a room of 1,500 cubic feet the vapour was generally sufficient to destroy a six days' growth of the bacillus coli communis, the cholera bacillus, and a five days' agar culture of typhoid, but sporing anthrax on silk threads grew more abundantly than the control. Absolute phenol vapour had an advantage over izal, or "No. 5," in its greater diffusibility and penetrating power. It even killed germs of such resistance as staphylococci and streptococci when wrapped in an envelope of filter paper. It killed other microbes exposed to the vapour with four failures out of thirty-three pieces of inoculated material employed. In three of the four, the failure was evidently due to an accident of position. Dr. Johnson considers "that the vapour of absolute phenol in a strength of 0.64 per cent. is a reliable germicide for the majority of these microbes when exposed to its action in an ordinary room for 16 hours," but recommends a working strength of 1 per cent., that is, the evaporation of 12 ounces for every 1,000 feet. The thesis also deals with the experiments of other observers on these and other vapours, and details Professor Delépine's method of disinfecting walls by nascent chlorine obtained from bleaching powder. We are glad that the youngest of our Universities is encouraging original research on the part of its graduates. We learn from other sources that a considerable amount of sanitary assistance is being given to the health officers by professors of the Colleges affiliated to this University, not only in Manchester, where Professor Delépine has been working along with Dr. Niven at the tuberculosis question, but also in Liverpool, where the subject of tuberculous milk is obtaining serious attention, and in Leeds, where for a couple of years Professor Trevelyan has been doing good work in the bacterial diagnosis of diphtheria.

THE TRUTH ABOUT THE FLASH-POINT OF MINERAL OILS.

ADDRESSING a meeting of the Lamp Trade Association, on July 7, at the Holborn Hotel, Mr. Cecil H. New, who, along with Mr. R. D. Steuart, F.I.C., and Professor Atfield, is one of the few Englishmen of science who have put the public protection before self, uttered some necessary truths which we trust will be carefully weighed by the members of the Select Committee of the House of Commons. It appears incredible but it is a fact that the standard oil gang are already boasting that they have "nobbled" the Committee just as they did the American tribunals.

Mr. New said:—

In complying with the request of Mr. Wright to place before you this afternoon some facts—scientific and otherwise—in connection with the oil trade and lamp accidents, I have taken it for granted that you are all more or less conversant with the question as a whole, but are desirous of gathering more information on certain points of interest and importance that are for various reasons somewhat involved.

At the very outset I should like to state that I hold no brief for anyone. I first took this matter up some seven years ago. Since my interest was then arrested it has never flagged, but only because, as a scientific journalist, I could not sit speechless when so important scientific facts were being ignored, and thereby the reputation of science sullied. I have from the first pleaded only for the truth and fair play. They are the very two things I have not yet found. I care not whether oil comes from America, Scotland, Russia, Java, or Galicia; but we want it *safe*, and scientifically tested. I do not wish to inveigh, in abusive language, against any one source of supply, and though the facts of the present position, however dispassionately treated, are bound to be rather sensational, I shall say the same of any other source of supply that stoops to similar tactics in the future.

After this prologue let us come to the subject at once.

While dealing with some of these I hope I shall be acting serviceably if I also direct your attention, in passing, to sources from which you can cull fuller particulars on certain details that time will not allow me to enter into now. Lastly, I should state in these few introductory remarks that having been asked to communicate "some facts" bearing on this matter, I have taken special care to *confine* myself to what are *facts*, to the exclusion of conjectures or controversial matters.

I, therefore, purpose dividing my remarks into *two* headings, and in the *first* of these to deal with the main point at issue, namely, the standard of safety, while in the *second* I will throw a little light on the influences affecting this issue.

In order to clear the way, however, it is desirable to say a few words about the evidence given before the Select Committee that has now concluded its sittings. Those who are seeking information may be inclined to fly to this Blue Book; but it is a thing I would warn them against doing until they have got a grasp of their bearings. Such a tangled tissue of truths and untruths as they will find there is tough enough for even experts to digest. The value of the evidence can only be gauged with accuracy when the reader has a full knowledge of the history of the witnesses. For instance, nearly all the last portion of the evidence is useless. The seeker after information will be first taught by experts, and next be drinking in the advice of oil hawkers and others of that class, who have been dragged up from holes and corners to do what?—to give evidence, forsooth, for the enlightenment of men of culture and education!

Again, you may read evidence, blaming the lamp

entirely and excusing the oil, uttered by men who up to the time of this last inquiry have done nothing but write and speak to the contrary, and whose scientific experiments can never be effaced, however conveniently they may have been expunged from their evidence on this particular occasion.

In yet another instance I wrote to a friend in U.S.A. asking him to get the testimony of an independent refiner, and he did so, but with the remarks made by the refiner he also sent a letter saying that it was no good putting credence in them, as, under the stress of competition and the fear of the unknown, the refiner had *written* what wholly belied his opinions and confessions as stated to my friend in conversation.

A knowledge of all these subtle undercurrents are necessary, therefore, before the Blue Book evidence is read by the truth seeker. It is for *such* reasons that I would suggest that the following points should be first thoroughly mastered, and then the Blue Book evidence analysed afterwards.

With this short explanation ended, I can now proceed at once to deal with these two points.

The first is, the standard of safety.

At present all oil giving off inflammable vapour above 73 deg. F. when tested in the Abel cup is considered safe. More than 35 years back the standard of safety was 100 deg. F. But the method of testing was bad. About 20 years ago the testing was improved, and the Abel cup introduced, but the standard lowered to 73 deg. F. Ever since then science and common sense have been trying to get the standard restored to the original and proper temperature of 100 deg. F., with efficient testing. During all this time the agents of the American Oil Trust have been fighting against this change.

I need not weary you with the details of this fight in its early stages, but it is as well to remind you that three eminent experts devised an improved open tester. They were: Dr. Letheby, Prof. Abel, and Prof. Atfield. Strange to say, their schedule was at the last moment struck out of the Bill by Sir J. Fergusson at the instigation of the Petroleum Association with the consent of only *one* out of the three experts concerned. How and for what consideration this mysterious change was compounded remains the secret of Sir James, Sir F. Abel, and the Petroleum Association to this day.

By what sophistry of argument Sir F. Abel reconciles the reduction of the standard from 100 deg. to 73 deg., just because he devised a closed and more accurate tester, *he* only knows, and he has carefully avoided any calls for an explanation. The change is all the more unaccountable when it is known that the open tester of the three experts has been found to give results identical with the Abel tester. There was no talk of lowering the standard when this open tester was formulated. Why was it necessary with Abel's?

The following figures determined by Prof. Stevenson Macadam show how close this relationship is:—

| | Abel Tester. | | Open Cup. |
|-----|--------------|-----|-----------|
| (a) | 81 deg. | ... | 82 deg. |
| (b) | 80 deg. | ... | 82 deg. |
| (c) | 78 deg. | ... | 80 deg. |

Coming to the position of the question at the present moment, it has been stated that this country is the dumping ground for American waste oil. This I can prove in two ways, and wish the facts could be brought home to Mr. Jesse Collings.

In the first place, very little of the low grade oil *we* get is used in the States. This has been denied, and Mr. B. Redwood has prepared some marvellously-compiled tables showing the flash-points of oils in America. He has astutely taken advantage of the confusion in the American testers, which are numerous.

I cannot deal with these in detail, but would refer you to the *Oil and Colourman's Journal* for February and March, 1897, in which Redwood's tables are exposed,

and with them all their craft and *suppressio veri*. There are one or two points, however, that the tables reveal, which I should like to mention. It is not a difficult thing to establish, by a series of experiments, the ratio between the various testers in America and Abel's tester. This has been done both in the case of the States and other countries, with the result that out of 31 different countries there are only three having a standard lower than 73 deg. Abel, while 24 will not go below 80 deg. Abel. More than one-third range above 90 deg. F., and some exceed a 100 deg. Abel.

In America, out of 32 States under control, there are only nine having a standard below 100 deg. Abel, and there is not one with a flash-point so low as 73 deg., the lowest being 80 deg. Abel.

Another point is the confusion that is intentionally created in the minds of the English over the difference between the flash-point, the firing-point, and the use of open or closed testing-cups. To the chemist the matter is as simple as A.B.C.

Without confusing you over the details of these methods I may tell you that a flash-point of 90 deg. Abel equals 100 deg. Tagliabue, also 109 equals 120 Tag. This is a cardinal fact and will act as a compass for you when in the troubled waters of American statistics. The ratio has been established by frequent experiment, and is no theoretical supposition. How Mr. Redwood makes 73 deg. Abel equal 110 deg. Tagliabue is a trade secret of his own and his associated "experts."

I will give you an instance of the advantage taken of this confusion of facts.

You will all be aware that Royal Daylight, and other fancifully-named oils of the same quality, come into this country branded on the barrels 120 deg. test. It is of course apparent that this must be a fire test. We know by experiment that it has a flash test of about 70 deg. Abel. The public, however, know nothing beyond that 120 deg. sounds a very high temperature, and therefore very safe oil. Now, not only is this figure misleading, but it is an absolute fiction.

It is true that in Redwood's book on "Petroleum," vol. i., p. 355, it is stated that 120 deg. fire equals 73 deg. Abel, but it is only a bare statement, and does not compare well with the following figures that have been determined by myself and several other more exalted co-workers:—

| | Flash-point Abel. | | Flash-point Open. | | Fire Point. |
|----|----------------------|----------------|----------------------|--|-------------|
| 1. | 74 deg. F. ... | 85 deg. F. ... | 95 deg. F. | | |
| 2. | 74 deg. F. ... | 84 deg. F. ... | 93 deg. F. | | |
| 3. | 76 deg. F. ... | 89 deg. F. ... | 97 deg. F. | | |

You will thus see with so low a flash-point as 73 deg. the fire-point never reaches even 100 deg. As a point of fact it is a physical impossibility for an oil that will flash at 73 deg. Abel to delay firing until 120 deg.

If the light spirit necessary to cause the flash is present the firing of the oil is bound to follow in due course, that is about 25 deg. higher. I should also add that some of the experiments, giving the figures I have put before you, have been witness by the District Medical Officer of Health, who would be willing to swear them, together with myself, before a Justice of the Peace.

Is it a matter for wonder, therefore, that accidents happen as they do with this oil when the users are duped into a sense of safety by this 120 deg. test bogey?

We thus see the danger of this low-flash oil that we use, it being sent to us from America without let or hindrance because our Government are satisfied that it is good enough for the people, though they take good care to have only high-grade oil in use at Aldershot and other places under Government control.

So much then for the first proof that we are a dumping ground. In the second proof I wish to show you that this oil is made expressly for us from the "tops

and bottoms" of the oil refineries, and is not a genuine petroleum lamp oil distillate.

It is a fact accepted by all oil experts that the fraction distilled from crude oil between 150 deg. C. and 300 deg. C. is genuine burning oil. Before that the light products such as naphtha come over. After that interval of temperature the products are thick and form the basis of the lubricating oils.

I am now about to read you a record of the American methods of distilling crude petroleum, culled from the leading authority on technical matters, the journal of the Soc. Chem. Ind., on the publication committee of which is no less a person than Mr. B. Redwood himself.

When I have read you the table you may be disposed to ask yourselves how he reconciles the facts given in a journal he helps to publish with the ignorance he displays before Parliamentary Committees on such matters:—

Jour. Soc. Chem. Ind., August, 1894. There is an abstract of a paper by Mons. P. de Boissieu, on the "Present State of the Petroleum Industry." In connection with the American industry he says:—

"At the works of the Standard Oil Co., at Bayonne, near New York, six fractions are collected at the first distillation, as shown by the following tabular statement:—

| Name of Fraction. | Destination of Fraction. |
|----------------------------|--|
| 1. Light Naphthas ... | ...Sold as crude naphtha and refined into gasoline. |
| 2. Heavy Naphthas... | ...Fractionated into benzine and residue added to extra heavy naphthas, No. 3. |
| 3. Extra Heavy Naphthas... | Mixed in certain proportions with No. 5 and refined, the product being "Export Oil" (F.P., 69·8—75·2 F.) |
| 4. Water White ... | ...Refined into white lighting oil. |
| 5. Heavy Distillate ... | ... |
| 6. Slops ... | ...Added to the next batch of crude distilled. |

We see that No. 3, "extra heavy naphtha," is mixed with No. 5, "heavy distillate," and refined to give a certain product which is known as "export oil." This export oil has a flashing point ranging from 69·8 deg. Abel to 75·2 deg. Abel. The light naphtha is refined into gasoline. The heavy products out of No. 2, really the residues, are mixed with No. 3 to make the "extra heavy naphtha" extra heavy, and then the whole are slumped up together and made into a special "Royal Daylight." You will notice that the flash-points agree almost exactly with those of the oils sent to the far East and to England, 75 deg. to 76 deg. being the average flash-point of Royal Daylight, or Tea Rose, as it is called.

These two items are sufficient, I think, to show that there is truth in the "dumping ground" statement, while the flash-point figures show how urgent it is that the standard of safety should be restored to the old and original temperature.

To be continued.

AN ALBUMIN FACTORY is being started at Wuhu, China, by a resident German firm, who will employ some sixty work-people. Premises are being erected for machinery, fermenting, and drying rooms. From 7,000 eggs between 500 and 600 lbs. of yolk may be extracted, and 100 lbs. of albumin.

THE OLIVE OIL EXPORT from Malaga, Spain, during 1897 will be practically *nil*, the whole yield being wanted for home consumption, as the crop of 1896 was the smallest known for years past, though the quality was never better.

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Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

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Vol. VIII.—No. 261.

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TAKE NOTICE that on the 6th day of July, 1897, the House of Lords (The Lord Chancellor, Lord Watson, Lord Herschell, Lord Shand, and Lord Davey)

UNANIMOUSLY AFFIRMED

the Judgments of Mr. Justice Stirling and the Court of Appeal in the Case of POWELL (trading as **Goodall, Backhouse & Co.**) v. THE BIRMINGHAM VINEGAR BREWERY CO., LIMITED, and dismissed the Appeal of The Birmingham Vinegar Brewery Co., Limited, from such Judgments with costs in favour of **Goodall, Backhouse & Co.**

Dated this 8th day of July, 1897.

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Food and Sanitation.

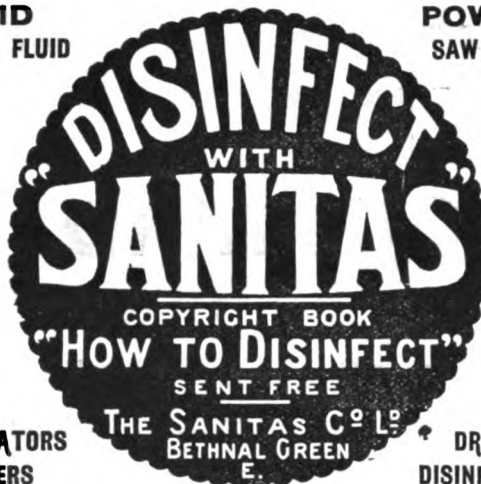
SATURDAY, AUGUST 7TH, 1897.

THE NEW FOOD AND DRUGS ACT BILL.

In introducing this measure Mr. Chaplin and Mr. T. W. Russell have done exactly what we expected they would do. Mr. Chaplin, on August 2, in asking leave to introduce a Bill to amend the Acts relating to the sale of food and drugs, said it was unusual to do so at

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KINGZETTS (Patent) SULPHUR FUMIGATING CANDLES.

this late period of the Session. (Ironical cheers.) There was, however, no intention whatever of proceeding with it. (Ironical laughter.) It was merely brought forward in fulfilment of a pledge given earlier in the Session. (Ironical laughter and cheers.) The object of the Bill was to give effect to recommendations which were made by the Committee which sat on the question of food and drugs; and his object in introducing the Bill now was in order that during the recess they might be able to ascertain the general drift of opinion with regard to the question. (Ironical cheers.)

The Bill (the text of which we give on another page) is beneath contempt. Everyone knows that no adulteration Act can be of any use unless it be compulsory on local authorities to put it into operation, or a central authority has powers to enforce it and charge the cost to the offending local body. Really, it would be better for the public and honesty if Mr. T. W. Russell would quit politics and go back to his former business of temperance sponging, tub-thumping, or stonemasonry. To produce a Bill such as this, after so many months of close thought, convicts him of being the, mentally, weakest of the horde of political parasites and poseurs. It is not, in any respect worth the 1d. charged for it by Her Majesty's printers.

"THE DEADLY 73°."

UNDER this title, Messrs. Simpkin, Marshall, Hamilton, Kent, and Co., Ltd., publish, in book form, a reprint of the admirably written series of articles by Mr. Pengelley, which appeared in *The Star* a few months ago. It is a ghastly villainy which *The Star* exposed, and a shame upon our House of Commons that the months go by, every day claiming its victim for the Standard Oil Company's murderous refuse, and no step taken to stop the horrors. If our members of the House could be got to read this indictment from *The Star*, we think the villainies of the American oil garg would receive short shift. However, the light is spreading and everything points to the raising of the flash point to 100° in the immediate future. *The Star* has deserved well of the public for its fearless championing of right in this question.

PURE, WHOLESOME, DELICIOUS.

BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House and
successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK!

DANISH PROGRESS.

THE report of Mr. James Boyle, the British Consul at Copenhagen, on the trade and agriculture of Denmark, is a very interesting compilation to all produce dealers. He says:—"As usual the principal exports to England are of agricultural produce. During the year 1896, 129,000,000 lbs. of butter, 141,785 cwts. of hams and bacon, and 9,180,000 score of eggs." As Denmark's total export of butter in 1876 was 133,150,000 lbs., it will be seen how large a proportion of the whole is sent to England. The Danish farmers' increase in produce over 1895 is 1,600,000 lbs., which is, no doubt, due to their having taken up dairying instead of fattening, the market for fat beasts being still depressed. From all reports which have reached him, Mr. Boyle gathers that general attention is being given to the breed of cattle, farmers being most careful in keeping no cows that are not good milkers. They also pay great attention to the technical part of dairying, sparing no expense to obtain the latest and best machinery. The increase would have been still greater if drought had not had a bad effect on the quality of fodder. The average price of butter for the year, in the English market, was 92 ore, as against 90·12 (ore) in 1895. Ninety ore is equal to one shilling.

The Danish production of bacon increased considerably in 1896. Over 1,200,000 pigs were killed in 1896, an increase on the preceding year of more than 25 per cent.

In consequence of the large quantities of bacon and ham produced, prices became lower, and, compared with 1895, the top quotation was 3s. lower per cwt. Notwithstanding these disparaging low prices and unfavourable returns for 1895, there was still a craze for building slaughter houses in 1896. There are now 18 private and 23 co-operative slaughter houses in Denmark, and although the co-operative are in the majority there are just as many pigs killed in the private slaughter houses—which (the Consul thinks) clearly shows the co-operative system is not progressing. The quality of meat seems to have improved, and it is stated that prices for the best Danish brands of bacon have been fully as high as those for Danish bacon. It is most probable that there will now be a decrease in the production of bacon, after the enormous development of the business for the last two years, and especially on account of the higher prices of corn in the autumn of 1896.

The export of eggs to all countries shows an increase of about 2,000,000 score on the year 1895 (from 7,900,000 to 9,800,000). The warm summer was unlucky for exporters, and in many cases brought a loss, the eggs arriving in a spoiled condition. On the subject of preserved goods, the Consul remarks:—"It can with confidence be asserted that the industry of

preserving food stands at as high a degree of excellence in Denmark as anywhere. The present condition of Danish agriculture is, he considers, a sufficient guarantee for the quality of this class of production. Among European establishments the firm of T. D. Beauvais (of Copenhagen) occupied a prominent position. They turn out every kind of meat, fruit, and vegetable sterilised after a Pasteurian method. It has gained awards at all exhibitions where it has exhibited. The manufactory itself has the latest machinery, especially an ingenious and expensive one which dispenses with labels and labelling by stamping very fine print in various colours in one impression on the tins, at the rate of 1,500 every hour. Another well-known house is that of Wolff and Arves Brothers. It is mostly known for its excellent preserved vegetables and fruit juices. The third is named the "Danish Wine and Preserving Manufactory," and is situated on the island of Fyn, one of the most prolific fruit-bearing spots in Denmark. This establishment is enlarging its premises, and it has introduced a system of pure cultivation of certain kinds of fruit, by which important results have been attained with respect to the fermentation of cider." "The Danish Milk Condensing Company is a lately-established concern, started with the object of developing Danish dairy industry, and at the same time offering to the public an article of consumption of superior quality. It has for a long time been the aim of scientific effort to produce condensed milk, which in taste, smell, nutritive value, and easy digestive qualities, would replace fresh milk. At last these efforts have been crowned with success by Mr. Fjelstrup, who has surmounted the difficulties connected with the treatment of milk. By a simple and ingenious process the milk is condensed at a low temperature in such a manner that its chemical composition is unaltered, and at the same time all bacteria are destroyed. This condensed-milk is, without any addition of sugar or other foreign substance, prepared from the best milk, obtained from cows under the constant inspection of veterinary surgeons to guard against the transfer of any contagious diseases of which milk may often be the bearer. Condensed to about one-third of the original volume, it may in this state serve the purpose of ordinary cream, and mixed with two parts of water to one of condensed milk, replace the original pure milk. The principal object is, however, to provide an article of export, packed in hermetically closed tins, that durability may be secured for an indefinite length of time, and for use in tropical climates where there is no opportunity of securing fresh milk, and this object has been fully achieved. The milk having undergone the necessary process in the condensing vats, is tapped by the method patented by the factory, into sterilised tins, which are closed air-tight as they run full, one by one, and then soldered immediately. These tins are placed in rows on shelves, where they remain for some time under close observation, until they are packed for exportation in cases containing four dozen each. The tins are fitted with tubes, the cutting of which enables the milk to be drawn in a clean and convenient manner. After a portion of the milk has been taken out, the tubes prevent the exposure of the milk to the air, and by this means the product retains its freshness and purity for a long period. Samples have been sent all over the globe, and the reports as to its freshness and purity have been most favourable. There seems an opening here for an enterprising dealer to cater for the trans-oceanic steamers on the Ship Canal.

CITRIC ACID.—A factory for the manufacture of citric acid and oil of lemon has been established in San Diego, California, during 1896. The factory employs seven hands, has steam works, and a capacity for 40,000 lemons a week. It takes from four to six weeks to condense the juice of sixty to seventy lemons into one pound of acid.

SCIENCE APPLIED TO THE HEN.

THE hen is an innocent-looking fowl, but sometimes she is a base deceiver. That is when she shares the food provided for her fruitful sisters, but lays no eggs to pay for it. Hitherto there has been no sure and expeditious way to pick out the tramp hen from a large flock, but the x-ray affords a test which has already been applied in at least one instance.

According to the *Youth's Companion*, Mr. Rudolph Spreckels, of California, son of the sugar king, owns a great poultry farm. He has ten thousand hens; and since the proportion of sterile or non-egg-bearing hens is as one to five, it recently occurred to him that he was supporting not less than two thousand in idleness and luxury.

Mr. Spreckels thereupon argued that if the Röntgen ray could locate stray buttons and vagrant fish-bones in the human anatomy, it should serve to make a hen give up her secrets. Two scientific experts were called in, and they experimented on a dozen chickens. Of these, eight were found to contain eggs; the other four were barren. A post-mortem examination confirmed the diagnosis.

Then an x-ray plant was established at the ranch, and at last accounts the ten thousand hens were being revealed in their true characters at the rate of thirty an hour. There is a glut in the dressed poultry market of San Francisco, and Mr. Spreckels' bill for corn-meal is much smaller than it was.

REDUCED MORTALITY FROM CONSUMPTION AMONG WOMEN AS A RESULT OF CYCLING.

At a recent meeting of the American Statistical Association attention was called to the fact that in Massachusetts a uniform reduction of the rate of female deaths began about five years ago, a period coinciding with the beginning of a more universal use of the bicycle by women, and the secretary of the State Board of Health of Massachusetts, Dr. Abbott, was inclined to attribute the decrease of the death-rate to this cause. In substantiation of this view he presented the following figures regarding the proportion of pulmonary tuberculosis in females to that in males in Massachusetts: "The rate in 1851 was 1,451 females to 1,000 males; in 1890, 1,055 females to 1,000 males; and in 1895, only 974 females to 1,000 males. 1895 was the first year in the history of the State in which the number of deaths from phthisis in females was smaller than that in males."

Considering that life in the open-air is the most essential hygienic indication in the preventive as well as curative treatment of consumption, the importance of the judicious use of the bicycle in the prophylaxis of consumption is obvious. That the proper amount of exercise should be adjusted by a physician to each individual cyclist, especially if she, or he, be in delicate health, need hardly be pointed out, no more than the fact that the body of the rider must be erect and the saddle hygienically constructed and in conformity with the requirements of each sex.—*Medical Review*.

LIFE WAS MEANT TO BE A STRUGGLE.

If humanitarianism has modified the doctrine of natural selection among mankind to the extent that the sick and the helpless are no longer forced to the wall, it does not contemplate that the idle, the vicious, and the improvident shall share alike with the industrious, the virtuous, and the far-sighted. Neither in fable nor in reality can the grasshopper expect to partake of the store of the ant. Neither law nor philanthropy can avert from us the consequences of our own deeds, nor

raise us permanently to a higher level than our own abilities entitle us to. The individuality of human nature demands full play for its faculties, free from the trammels of a paternal government on the dead level of a socialistic community. In no other way is possible that keen competition which lies at the root of human advancement. A fair and honest chance in life is all that can be asked, for beyond that artificial aids are usually as bad as artificial barriers.

It is the fashion nowadays among many magazine writers to hold up to us the nations of the East as having solved many of those problems of life which perplex us so sorely. The statement is generally made that the peoples of the Orient occupy towards us the position of age and experience, and have learned to submit to fate and not to attempt to alter the decrees of destiny. It does not require very much discernment to see that this is a most superficial view. The truth is that the stagnation of the eastern nations is due to the crushing out of individuality, the lack of competition, and that fatalism which is one of the accompaniments of worn-out civilisations. Advancement comes from individual efforts, the absence of artificial restraints, and the free play of natural laws. Unrest and dissatisfaction are the essentials of that progress which is gradually lifting the human race to a higher plane, and which in the deepest and truest sense gives its best worth to human endeavour.—*Iron Age*.

WALL-PAPER8.

THE shabbiest of poor substitutes for something that was only tolerable because necessary! Wall-paper succeeded tapestry, which was absolutely essential at the time of its use, to render damp rooms habitable. It formed a non-conducting air-space next to the walls, but it could be taken down and dusted and sterilized by direct sunlight. Wall-paper, on the contrary, is worse than useless; it begins with ill-smelling size and paste and ends with colonies of whatever germ-cultures happen to be generated in the house. The material for walls is paint, either in the form of coloured, disinfected kalsomine, or oil paint pure and simple, and either should be fit to stand scrubbing.—Editor, *Drugs, Oils and Paints*.

CHEMISTS' PRESCRIPTION8.

THE Birmingham Health Committee had before them the report of Dr. Hill on the analysis of prescriptions recently taken from chemists in the city. In all, some two dozen samples were taken, of which, we understand, 19 were satisfactory. In the remaining five there were certain irregularities, due, however, more to carelessness than to any attempt to evade the law. In one or two cases, indeed, there was an excess of the most expensive drugs; others however did not come up to the full strength. One case was so bad that a prosecution was ordered; the others will be warned.

EXPERIMENT8 WITH FOOD8.

WE are promised (says *The Globe*) a full account of the remarkable experiments made by the U.S. Department of Agriculture on the nutritive and heating value of various foods. The experiments were conducted by keeping healthy persons in a special cage or cell lined with copper, and fitted up like a room, with chair, table, and cot-bed. The cell was 7ft. long, 4ft. wide, and 6½ft. high. The doors were of glass, and a current of air kept up the ventilation. Food and drink, all carefully weighed and analysed, was passed in to the subject. The ventilating air was also measured and analysed. In short, everything was done to know the

give-and-take of the body—even in point of heat. The cell was kept at a comfortable temperature by cold water circulating in pipes, the water absorbing the heat given off by the subject.

Men were kept in this cell from two and a-half to twelve days at a stretch. The foods which make blood, muscle, bone, and brain (protein compounds) were lean meat, white of egg, caseine of milk, including cheese, and gluten of wheat (bread). The fats were fat of meat, butter, and milk, oil of wheat, etc.; the carbohydrates were the sugar and starch of bread, potatoes, and ordinary sugar. These fats and carbohydrates supply most of the fuel for the animal heat. Tea and coffee contain little or no nutriment without sugar and milk. In the most instructive case, the subject, a young man of twenty-three, was found to gain half an ounce of protein and lose half an ounce of fat daily, while he rested from all work for three days. When he performed brain work (namely, studying a German treatise on physics) for three days, the results were much the same. When he engaged in hard muscular work for three days, he lost one-sixth of an ounce of protein a day, and nearly seven ounces of fat. The heating value of the food consumed in this period of hard labour was nearly doubled. It is calculated that if his supply of butter, sugar, and bacon had been increased, he would not have lost flesh under the hard work.

THE NUTRITIVE VALUE OF BREAD.

THE real nutritive value of bread, says Mr. W. Jago, in the *British Baker and Confectioner*, does not depend entirely upon its intrinsic nature: it depends also on the manner in which it is consumed. Proper mastication is of capital importance. We have seen that the lightness of bread is a quality of the utmost value, because heavy and compact bread is but very badly utilised by the organism, notwithstanding its richness in nutritive elements. It is evident that perfect mastication most effectively minimises the difference between heavy and light bread. Following the same train of ideas, stale bread should be preferable to that which is perfectly fresh, the latter being less easily properly masticated. In short, the use of sopped or soaked bread (as in soup or bread and milk) and all the preparations which facilitate the mechanical division of bread in the stomach is to be recommended as permitting a more complete utilisation of this excellent aliment.

Such is the conclusion of M. Boutroux's important contribution to the science of bread-making. No apology to the readers of this journal is necessary for the lengthy quotation given, the value of which they will not fail to recognise. On the other hand, our thanks and acknowledgements are due to M. Boutroux for the service he has rendered to the baking industry, not only of his own country, which so long has held a foremost position in the high quality of its bread supply, but also to that of other lands.

The relative nutritive value of white and brown breads is a subject fraught throughout with interest. But among points that will appeal strongly to bakers generally, and should be more fully recognised by the public, is that of the lightness of bread being such an important factor in its nutritive character. Bakers, as a class, know almost instinctively that good bread should be light and well risen, and that the interior should show not the slightest signs of clamminess; but against this there is the fact that a large section of the public look for and demand a solid loaf. In fact, instances are well known of members of the public decrying baker's bread "because of there being no substance in it," and lauding to the skies the heavy home-made loaf. In many such instances analysis shows the light baker's loaf to contain no more water, and usually a higher percentage of proteid matter. In-

digestibility is too frequently looked on as the measure of nutritive value.

The thrifty housewife may often deplore the rate at which her baker's bread disappears before the brisk appetites of a lusty crew of youngsters, but she may console herself with this fact, that all the bread thus consumed and digesting so quickly is for that very reason at that same rate of speed conveying sterling nutriment to the blood. Children will never eat too much bread and butter for their good, and while this is building up their frames the instinct for thrift is consoled by the remembrance that few if any other sorts of aliment will build up sturdy, healthy frames at as cheap a rate as light, wholesome, well-baked bread.

COBWEBS AND WINE.

THAT faith with regard to the age and respectability of wine may be implicitly reposed in cobwebs and dust encrusting the bottles containing it has long ceased to be believed by connoisseurs, but *Nature* has just discovered that trust in this direction may be misplaced. The source of information relied upon by our leading scientific journal is a *Bulletin* (No. 7) of the Division of Entomology of the U.S. Department of Agriculture, according to which an industry has recently sprung up in France and Pennsylvania, which consists of the farming of spiders for the purpose of stocking wine-cellar, and thus securing an almost immediate coating of cobwebs to new wine bottles, giving them the appearance of great age. This industry is carried on in a little French village in the Department of Loire, and near Philadelphia, where *Epeira vulgaris* and *Nephila plumipes* are raised in large quantities and sold to wine merchants at the rate of ten dollars per hundred.—*Pharmaceutical Journal*.

MILK.

AT Bristol, on July 30, Herbert Palmer, of Hillside House, Hope Chappel Hill, Hotwells, was summoned at the instance of Frederick William Simpson, inspector under the Food and Drugs Act, with selling, on July 12, milk adulterated with not less than 6 per cent. of added water. Mr. Simpson having given evidence in support of the summons and submitted the report of the city analyst, defendant, who stated that he sold the milk as he obtained it, was fined 20s. and costs, or in default 14 days imprisonment.

AT Stockton, on July 29, Christopher Z. Mein was fined 20s., including costs, for selling milk adulterated with 12 per cent. of added water.—Elizabeth Rodgers, for selling milk adulterated with 9 per cent. of added water, was fined 15s., including costs.—A charge against Elizabeth Taylor of selling watered milk was dismissed on payment of costs.

DEATH FROM EATING TINNED SALMON.

AN exceedingly sad case of poisoning by the eating of tinned fish is reported from West Hartlepool. Wm. Seago (31), of 15, Green-street, ate some tinned salmon on returning from work on Saturday afternoon. He was immediately taken ill, and died within 10 minutes. Deceased, who was a married man, was a porter at West Hartlepool Railway Station. A post-mortem examination has been made, and an inquest will be held.

OLIVE OIL.

AT Penarth, Thomas Phillips, grocer, of Waunarlwydd, was summoned for selling olive oil that had been adulterated. As, however, defendant said he had sold the oil just as he had received it, he was let off with a fine of 6d. and costs.

DRUG ADULTERATIONS.

AT Chorley, James Ashton, grocer, and dealer in patent medicines, was summoned for selling what purported to be tincture of rhubarb which was not of the nature and substance demanded.—Mr. Milton (for Mr. S. Morris) appeared for the Authorities, and Mr. Ambrose Jones, barrister (instructed by Mr. Callis,) defended.—Police-Sergeant Jackson stated that on Saturday, the 24th of April, he, accompanied by Police-constable Gerrard, visited defendant's grocer's shop, in Croston, and he asked Thomas Ashton, the son, to supply him with 6ozs. of tincture of Turkey rhubarb. Witness paid 2s. for the article, and a penny for the bottle in which it was put. He told Ashton that he had bought the sample for the purpose of analysis, and offered to divide it into three portions, which offer was accepted. Each of the three bottles was labelled. The bottle from which the tincture was supplied was labelled "The Best Tincture Turkey Rhubarb. British Pharmacopœal Strength—medicinal properties,—stomachic and purgative. Prepared by A. Waterworth, chemist, Church-street, Preston." Witness produced a copy of *The British Pharmacopœia*, which contained the ingredients of the proper tincture of rhubarb. The sample was submitted to the county analyst, whose certificate was as follows: "3·86 per cent. of solid matter, mainly extract of liquorice; 39·55 alcohol, corresponding to 82·13 per cent. of proof spirit; 56·59 per cent. of water in 100 parts. The sample is weak in spirit, and is practically devoid of rhubarb, and of all ingredients of the British Pharmacopœia, of which extract of liquorice is not an ingredient." In cross-examination, witness said he would not swear that Ashton, jnr., did not tell him the tincture had been standing so long that he could not guarantee it. The analyst remarked to witness that solids would not evaporate, nor yet the spirit if kept properly corked.—P.C. Gerrard corroborated.—In defence, Thomas Ashton, defendant's son, said that he managed the business of his father, who lived in the house adjoining the shop, and kept the books. Witness purchased the trade stock. On the 24th of April the Sergeant asked for a sample of compound tincture of rhubarb, which was not a drug that was often asked for. The bottle—which was only half full when bought—had been in stock for two years, and witness did not think he had made a sale from it. Witness asked the Sergeant if the tincture would depreciate if kept two years, and he replied that he would see that the analyst made some allowance for it.—Mr. Jones submitted two grounds on which he contended that there was no case. The first was that in the words of the section of the Act there must be a sale to the prejudice of the purchaser, and therefore it was incumbent on the prosecutor to show that defendant had a guilty knowledge that the tincture was of inferior quality; but that had not been done. Defendant left the sale of the goods to his son, and there was no evidence that either of them had a guilty knowledge of the inferiority of the drug. In the second place, the Sergeant would not pledge himself that the younger Ashton did not warn him that the tincture might have evaporated.—The Chairman said the magistrates dismissed that point altogether, as if there had been evaporation it would only be the loss of spirit, and the medicine would be so much the richer,—for the rhubarb would not go,—and therefore of more benefit to the purchaser. The article would only get stronger by the evaporation of the spirit, therefore that was not worth arguing.—Mr. Jones: Then the Bench are satisfied that the ingredients were not present?—The Chairman: Certainly; they were not there.—Mr. Jones then spoke as to the character of the defendant.—Mr. Milton replied to the argument as to defendant not having a guilty knowledge; and after citing cases he maintained that no defence had been made out.—The magistrates having consulted privately, the Chairman said they found that the defendant carried on the

business and that his son was only a servant. The defendant was therefore liable for the sale of the adulterated article. To those on the Bench who understood the nature and quality of drugs it seemed an absolute farce to pretend to sell an article under the description of tincture of rhubarb which did not contain that drug. The stuff might perhaps do to be sold as a cough bottle. So far as was known the defendant was a worthy man, and was not the party the Bench would like to get at. The full penalty was £20, but they would mitigate it to 21s. and costs.—Daish, Salter, and Co., grocers, of Croston, were also summoned under similar circumstances.—Mr. Milton called Police-Sergeant Jackson, who detailed the purchase of 6ozs. of compound tincture of rhubarb from a shopman in defendant's employ, and for which he paid 2s. The bottle from which the article was taken was labelled, "The Best Compound Tincture of Rhubarb, made from the genuine root. Supplied by Marsden, of Preston." The analyst certified as follows: "The contents of 100 parts: 5·02 per cent. total solid matter, mainly extract of liquorice and sugar; 23·69 per cent. alcohol, corresponding to 50·57 proof spirit; and 71·29 water. The sample contains 40 per cent. excess of water, and is almost devoid of rhubarb and of the proper ingredients of tincture of rhubarb."—Mr. Jones, on behalf of defendants, pleaded guilty, and in mitigation said they had no means of testing whether the drugs they sold were good or bad; they depended upon the reputation of the wholesale druggist who supplied the drugs.—The Chairman said that with regard to the price, the inference would be, he was afraid, that low prices often led to adulteration. The magistrates could not treat this case as leniently as the last, and if any more cases of a similar nature came before them they would be treated more seriously than in the present instance. It was a shocking thing to sell adulterated articles, such as drugs, which people required to use as a medicinal remedy in cases of sickness. The remedy in question was a very old one, and no doubt it had helped to save thousands of lives. It had the great merit of being an innocent remedy, and a person could take a dose without injury. Tincture of rhubarb was often a remedy that was taken in cases of sickness before people sent for a doctor, and oftentimes saved them the expence of fetching a doctor. Anyone acquainted with the genuine article would not take such rubbish as that in question was shown to be. In this case the defendants would have to pay a fine of £5 and costs, and in any future cases of the kind the magistrates would increase the penalty very materially.—The Chairman further remarked that defendants had a good right of action against the person who sold them the sophisticated article. He hoped the publicity that the case would get would prevent grocers selling rubbishy drugs.

SPREADING THE LIGHT.

A CORONER ON THE LOW FLASH MOLOCH.

THE death occurred at the Middlesex Hospital, on Monday morning, of a woman named Eliza Fanny Clark, aged 33, wife of a cap-presser, living at 138, Great Titchfield-street, and an inquest was held on the body yesterday by Dr. H. R. Oswald, the deputy-coroner for Central London. *The Star* reports that the first witness called was the deceased's husband, Wm. Clark. His story was that on Sunday morning, between one and two o'clock, he heard the deceased screaming out, and on his going into the adjoining room he found her in flames, which he succeeded in putting out by wrapping a coat around her.

There was an ordinary petroleum lamp with an earthenware reservoir on the table, and the deceased told him that she was filling the lamp when the oil took fire, and the front part of her blouse caught fire.

The deceased, although he had often warned her not to do such a thing, was in the habit, instead of putting the lighted lamp out and filling it by the light of a candle, of unscrewing the top of the lamp and pouring the oil in it whilst the lamp was still alight. The deceased was afterwards removed to the Middlesex Hospital, where she died.

In answer to the coroner, the witness said that there was no explosion within the lamp. There was no oil spilt about the place. He did not know if the deceased caught fire by the wick or by the oil.

The coroner asked what kind of oil it was. The witness replied he did not know. The coroner asked if it was American oil? The witness replied that he did not know; he only knew where it was purchased.

The coroner said that he was unable to ascertain exactly how these burns were received. He wanted to ascertain whether this accident occurred through an explosion by the oil itself taking fire, or the dress of deceased catching the wick, but they were unable to ascertain which.

They knew that there was very inferior American oil imported into this country which was not allowed by the United States Government to be sold in that country, but which was exported into this, and it was bought by persons of limited means. The flashing point of such oil was low, and it was, therefore, very easily exploded. Even a lighted match could be thrown into oil of a high flash-point, and it would go out. There was no doubt that the deceased had been guilty of a careless act in endeavouring to put oil into the lamp whilst the lamp was alight.

The jury returned a verdict of "Accidental death."

The *Daily News*, commenting on the fact that Dr. Oswald, the coroner, has joined the crusade against "low-flash" mineral oils, says:—"The matter is now under the consideration of a Committee of the House of Commons, and the sooner we have its report and legislation to follow it the better. The *Star* has done good service in exposing this very serious public danger in a series of ably-written articles, and the *Economist* has now followed on the same side.

"It is urged that no possible improvement of the lamps in which these inferior oils are burnt can possibly serve. The oils themselves must be improved off the face of the earth. The general opinion is that a flash-point of 100 degs. represents the minimum of safety, and that the 73 degs. at which some saleable oils are permitted to stand is ridiculously low. The *Star* would have us believe that in this matter we are the slaves of the great American Oil Trust. That is a matter of opinion, but there seems little room for doubt that some of our imported oils are responsible for some of the worst accidents with which the firemen and doctors have to deal."

A BILL TO AMEND THE ACTS RELATING TO THE SALE OF FOOD AND DRUGS.

(Brought in by Mr. CHAPLIN and Mr. T. W. RUSSELL.)

BE it enacted by the Queen's most Excellent Majesty by and with the advice and consent of the Lords Spiritual, and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. It shall be the duty of every local authority entrusted with the execution of the laws relating to the sale of food and drugs to put in force from time to time, as occasion may arise, the powers with which they are invested, so as to provide proper securities for the sale of food and drugs in a pure and genuine condition, and in particular to direct their officers to take samples for analysis.

2. The minimum fine for a second or subsequent offence under the Sale of Food and Drugs Acts shall be *five pounds*, and in the case of a third or subsequent

offence the court may in its discretion impose imprisonment without the option of a fine.

3. Where a person convicted of an offence under the Sale of Food and Drugs Acts has been within *twelve months* previously convicted of another offence under those Acts, the court may, if it thinks fit and finds that he knowingly and wilfully committed both those offences, order that a notice of the facts be affixed in such form and manner, and for such period not exceeding *twenty-one* days, as the court may order to any premises occupied by that person, and that he do pay the costs of such affixing, and if any persons obstructs the affixing of any such notice, or removes, defaces, or conceals the notice while affixed during that period, he shall for each offence be liable on summary conviction to a fine not exceeding *five pounds*.

4.—(1.) The letters required to be printed on the paper wrapper in which margarine is sold shall be not less than half an inch long and distinctly legible.

(2.) The inclosure of margarine in a wrapper labelled as required by law shall be sufficient notice to the purchaser that the contents are margarine.

(3.) Margarine not packed or not consigned in accordance with the requirements of law is prohibited to be imported into the United Kingdom or Ireland as if it were included in the table of prohibitions contained in section forty-two of the Customs Act, 1876.

(4.) This section shall be construed as part of the Margarine Act, 1887.

5. Every person who sells milk from a vehicle or from a can or other receptacle shall have inscribed on the vehicle or receptacle the name and address of the person by whom or on whose behalf the milk is sold, and in default shall be liable on summary conviction to a fine not exceeding *two pounds*.

6. The division required by section fourteen of the Sale of Food and Drugs Act, 1875, of an article purchased for analysis shall be made in the case of samples taken of milk in course of delivery.

7. Every tin or other receptacle containing condensed skim milk must bear a label on which the words "Condensed Skim Milk" are printed in large and legible type, and if any person sells or exposes or offers for sale condensed skim milk in contravention of this section, he shall be liable on summary conviction to a fine not exceeding *two pounds*.

8. The label referred to in section eight of the Sale of Food and Drugs Act, 1875, shall not be deemed to be distinctly and legibly written or printed within the meaning of that section unless it is so written or printed as not to be obscured by the other printed matter on the label: Provided that nothing in this enactment shall affect any registered trade mark, but the Comptroller-General of Patents, Designs, and Trade Marks shall not register any trade mark purporting to describe a mixture unless it complies with the requirements of this enactment.

9.—(1.) The limit of *twenty-eight* days fixed by section 10 of the Sale of Food and Drugs Act Amendment Act, 1879, for the service of a summons under the Sale of Food and Drugs Acts shall extend to non-perishable articles, and the words "and in the case of a perishable article" in that section shall be repealed.

(2.) Any such summons must be served not less than *fourteen* days before the day on which it is returnable.

(3.) There must be served with any such summons a copy of any analyst's certificate obtained on behalf of the prosecutor.

10. A warranty shall not be available as a defence to any proceeding under the Sale of Food and Drugs Acts unless the defendant has, within *seven* days after receipt from the purchaser of notice of his intention to take proceedings, sent to the purchaser a written notice stating that he intends to rely on the warranty, and specifying the name and address of the person from whom he received it.

11. The justices or court of appeal shall, on the request of either party under section 22 of the Sale of Food and Drugs Act, 1875, cause an article of food or drug to be sent to the Commissioners of Inland Revenue for analysis.

12.—(1.) The certificate of analysis required by the Sale of Food and Drugs Act, 1875, shall be in a form prescribed by the Commissioners of Inland Revenue, and section 18 of that Act, and the schedule to the Act, are hereby repealed.

(2.) At the hearing of the information in any proceeding under the Sale of Food and Drugs Acts, the production by the defendant of a certificate by a public analyst shall be sufficient evidence of the facts therein stated, unless the prosecutor requires that the analyst be called as a witness.

(3.) The certificate of analysis given under section 22 of the Sale of Food and Drugs Act, 1875, by any chemical officer at Somerset House shall be sufficient evidence of the facts therein stated, unless either party requires that the analyst be called as a witness.

13.—(1.) This Act may be cited as the Sale of Food and Drugs Act, 1897, and shall, except as specially provided by this Act, be construed as part of the Sale of Food and Drugs Act, 1875.

(2.) The Sale of Food and Drugs Act, 1875, the Sale of Food and Drugs Act Amendment Act, 1879, the Margarine Act, 1887, and this Act, may be cited collectively as the Sale of Food and Drugs Acts, 1875 to 1897, and are in this Act referred to as the Sale of Food and Drugs Acts.

(3.) This Act shall come into operation on the first day of January, one thousand eight hundred and ninety-eight.

BERKSHIRE AND ADULTERATION.

MR. FISHER, public analyst, states that fourteen articles were analysed under the Food and Drugs Act, consisting of cheese, butter, coffee, and mustard, were found free from adulteration, and of satisfactory quality. Four drinking waters have been examined—three were of good quality, and one doubtful in character.

ANALYSTS AT VARIANCE.

At St. Helens Police-court, on July 30, Ann Jane Webster, of 13, Rainford-road, Denton's Green, St. Helens, was charged with selling adulterated milk. Mr. Joseph Massey prosecuted on behalf of the Corporation, and said that on Monday, July 12, Sergeant Kerrigan bought a pint of new milk from defendant, which Dr. Robertson had certified contained 8·2 per cent. of added water.—Mr. J. Haslam Fox appeared for the defence, and said that when the officer called the maid was in the shippen milking. Mrs. Webster went direct to the shippen and took the milk which had just come from the cow and served it to the officer. When Mrs. Webster got the summons she took the sample that had been given her to Mr. Davies, of Edward Davies and Son, analysts, of Liverpool, and he had given a certificate to the effect that the milk had not been watered. The charge was that they had adulterated the milk with water, and he contended this could not be so in face of Mr. Davies's certificate. Three witnesses, including Mr. Davies, were called for the defence. Mr. Davies said it was quite possible that the milk, which was perfectly genuine and direct from the cow, would give an analysis such as Dr. Robertson had certified. The summons was dismissed.

SPIRITS.

At Auckland, on July 26, John Pedelty, Pot and Glass Inn, Etherley, was charged with selling whiskey

adulterated 40·79, or 15 degrees below the strength required. Mrs. Pedelty said the spirit was sold as received from Nixey's, Hartlepool. Defendant never mixed whiskey, which had been a month in. The Inspector said in bottle, as in this case, spirit would not lose 1 per cent. in a month. This was not a case of ordinary adulteration; it was a record in witness's experience. The Bench said the case was a bad one, fined the defendant 40s., and referred him for satisfaction to the firm that supplied the whiskey.

At Kettering, on July 28, Ebenezer Coltman, inn-keeper, of Rothwell, was summoned for a breach of the Food and Drugs Act by selling adulterated brandy at Kettering on June 22. There were two other charges against him, one of selling adulterated whiskey and the other of selling beer in a measure not properly marked, all being at the same time and place.—Mr. E. P. Toller prosecuted, and Mr. P. L. Rawlins defended.—The offence was alleged to have been committed at the North Park on Jubilee Day, where the defendant had a booth.—Mr. Clowes, inspector of weights and measures, deposed to visiting the booth and obtaining a quantity of brandy, which he forwarded to the county analyst. He saw no notice stating that the spirits were diluted according to price, and that no particular strength was guaranteed.—Defendant was sworn, and said that the notice was put up inside the booth. The brandy was diluted according to the limit allowed by the Act of Parliament.—John Loasby and Nathaniel Coe, shoehands, who were assisting in the booths, stated that the notice was put up.—The Bench inflicted a fine of £1 and 6s. costs.—Defendant thereupon pleaded guilty to the other charges, the prosecution agreeing to a nominal fine of 1s. and payment of costs 6s.

MARGARINE.

At Greenwich, on July 30, Jenkins Thomas, of 100, Lower-road, Rotherhithe, was summoned by Albert Weatherhead, of Stoke Newington, for selling margarine other than in a paper upon which the word "margarine" was printed. There were two summonses in respect of two successive days. Thomas summoned his assistant, Annie Edwards, in precisely similar terms for the offence.—Mr. Ricketts, for the defendant Thomas, said the girl came from Wales six months ago as a housemaid, and only a few days before the samples were taken was engaged by Mr. Thomas as an assistant in his shop. He gave her full instructions as to the sale of butter and margarine in their proper papers, yet she made the same blunder on two successive days, even though she was admonished on the first occasion.—Thomas gave evidence to this effect, and the girl Edwards admitted that the fault was hers.—Mr. Kennedy said the defendant Thomas had exonerated himself, and dismissed the summons against him. He fined the girl Edwards 1s. on each summons, without costs.

BEDFORDSHIRE AND ADULTERATION.

At the monthly meeting of the newly-formed Bedfordshire Chamber of Agriculture the following resolutions were passed, and a copy sent the First Lord of the Treasury and the Members of Parliament for the County and borough: "1. That this Chamber is of opinion that the lax administration of the present law, coupled with the necessity for further restrictions and regulations as to the sale of butter substitutes, has led to widespread fraudulent evasion of the Margarine and Food and Drugs Acts. 2. That this Chamber respectfully urges upon the Government the immediate necessity for introducing the Bill referred to by the

First Lord of the Treasury on May 27 last to give effect to the recommendations of the Select Committee on Food products, and trusts that particular attention be shown to the recommendation of the Select Committee on the question of colouring and admixture of margarine with butter."

Might we suggest that that Chamber would do well to start with Bedford, where the Adulteration Acts have been a dead letter for years.

LINDSEY AND ADULTERATION.

DR. MUTER, public analyst, reported that he had analysed 50 samples of food and drugs during the quarter, and of these, four were found to be adulterated. In each case the offenders were prosecuted and convicted.

THE TRUTH ABOUT THE FLASH-POINT OF MINERAL OILS.

(Continued from page 370).

Having thus justified, as it were, the "*Point at Issue*," I will proceed to the next step in my argument, namely: *The adverse influences* affecting and virtually preventing honest debate and settlement of the point at issue.

I need hardly tell you of the supremacy of the Oil Trust, or, as it is now called, the Standard Oil Co. Their history has been told by an abler tongue than mine, and described by a more powerful pen in Mr. H. D. Lloyd's book, called "*Wealth against Common-wealth*." Therein you will find *facts* gathered from the Official and Court Records of America, and the revolting corruption and chicanery exposed will, I am sure, raise the indignation of honest men to boiling-point.

Were all the history of this company (and the way they are seeking to introduce their tricks here) better known in this country, I do not doubt that the oil question would be settled very soon. For this reason I would like to arouse your interest and wet your appetite with a short summary of the doings of this company, which is practically identical with the Anglo-American Oil Co. we know so well here.

To do this, we must go back to the close of the petroleum boom in 1872, when, after a spell of unwonted activity, the oil industry seemed to suddenly collapse, and failure succeeded failure. In 1873 a panic ensued, banks failed, many oil makers committed suicide, and hundreds were driven into lunatic asylums. And why? Because a small party of six men had in some occult way acquired a hold over the trade, by means of which they rose over the bodies of the men they had killed by the despair of ruin, to a power and wealth that has since become the wonder of the world. It is stated on sound authority (which has never been denied) that the yearly income of one individual member of the ring is six millions sterling, and the capital of the concern is nearly 30 millions sterling, or rather that is what it was in 1888 as revealed in the *Trusts-Report* of the New York Senate. This member was originally a clerk in a country produce-store in Cleveland.

This select party has since been increased to thirteen, and such are their incomes that if they tried to catch and count their gold coins as they fell from the dies of the Mint their fingers could not catch them, but, slipping over their hands, the bullion would rise and rise from knee to waist, from waist to mouth, and finally suffocate them. It is such as these who to make "a little more" burn 365 English people to death every year with the refuse oil they dare not sell in the States. Yet not one of them reside in the oil region, or even own oil wells or oil lands.

* * * *

"How did they acquire such wealth?"

"We shall see. In 1872, under the title of the South Improvement Company, these few men obtained a secret contract with the railroads in which it was agreed that the freight rates of all competitors should be doubled, these six men—not the railroad company—taking the larger portion of the extra returns. There were other terms in that bond, but this was the chief one. With this double-edged weapon they all but ruined refiners of oil, then, stepping in, offered what they liked for the concerns. Hundreds 'went under' rather than be parties to the tricks of this all-powerful clique. The rest were allowed to continue refining, only they had to make monthly reports of their production, and were only allowed to refine just enough to suit the speculations of that controlling sextuplet. Further, they were sworn to secrecy as to the true ownership of the works, the breaking of which oath meant ruin. The railroad companies also had to make a return of all the oil shipped by those outside the charmed circle, stating how much, where from, and to whom it was sent. In this way nearly all the works were acquired at half their real value, sometimes less, but never more than half the lowest assessed price was paid, and then only on the above terms. Thus the free American citizens one day woke up to find their grand oil trade monopolised and ruined except in the interests of this select coterie. From offices resplendent with plate glass and plush upholstery they sang the death dirge of the honest founders of a national industry, and no man, or Government, durst silence them.

* * * *

At length, in sheer desperation, the people in the oil regions rose. Riots occurred among the thousands of ruined employes, and the Company was prosecuted. They were beaten at every point. One obscure attorney made a great name by the scathing address in which he exposed their doings. Yet what became of that attorney and the Company he denounced? It is here that we get an insight into the danger of this Ring. The Company was nominally dissolved, but *really* became the Oil Trust. The Attorney was admitted into the "dovecote," thus jumping from an income of a few hundred dollars a year to a salary equal to that of the President of the United States. Such an able enemy would, they saw, make an even more useful ally, and the railroad contracts were again "faked" accordingly. It is in this way that the number has risen to 13. Under this cloak of "trading" the same old game was carried on until the "Oil Trust" was again dominant. Their arbitrary but secret acquirement of oil works continued until their power was supreme, and their orders to stop shipping crude oil caused the property and livelihood of numbers of well-owners to be run to waste on the surface, finding its way into the lakes and rivers. The select seven lost nothing, but it was necessary in order that they might work their own ends.

It was a little too much, however, and the people rose again. They tore up the railroads that would not carry their oil, and a local civil war was imminent. Then, and only then, did the select few give permission for the shipment of crude to be resumed. Close on this followed the Anti-Trust Law. Once more the South Improvement Co., alias the Oil Trust, dissolved and blossomed out into the Standard Oil Company, an old foe with a new face. Time after time the records of the American Law Courts show that when a fresh competitor started, if he would not be bought at the S.O. price, he was told it was useless to go on. If oil was made, they had fixed the freights and supply of cars so that the oil could not be moved to market, while the following was always the final answer to all questions as to how it was done, "We have ways of making money of which you know nothing." And truly they had.

To be continued.

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UNANIMOUSLY AFFIRMED

the Judgments of Mr. Justice Stirling and the Court of Appeal in the Case of **POWELL** (trading as **Goodall, Backhouse & Co.**) v. **THE BIRMINGHAM VINEGAR BREWERY CO., LIMITED**, and dismissed the Appeal of **The Birmingham Vinegar Brewery Co., Limited**, from such Judgments with costs in favour of **Goodall, Backhouse & Co.**

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Food and Sanitation.

SATURDAY, AUGUST 14TH, 1897.

DR. HARVEY LITTLEJOHN ON MEAT INSPECTION.

DR. HARVEY LITTLEJOHN, who recently resigned the position of Medical Officer of Health for Sheffield, reports on the existing meat inspection at Sheffield:—

"It is now over five years since in my first annual report I drew the attention of the committee to the condition of the slaughter-houses in the city, and to the question of proper control of the meat supply. I regret that it has not been found possible to deal more

satisfactorily with this important subject. By all authorities, both at home and abroad, the provision of a public abattoir is regarded as of the first importance from a sanitary point of view in the equipment of a municipality. The influence of efficient control over the food supply of a community has been long recognised as having a most important bearing upon the health of the population, and this more especially in recent years, since it has been proved that many diseases are communicable from animals to man. The advantages offered by a public abattoir for efficiently supervising the meat supply are everywhere recognised, and in our city the absurdity of expecting that such control can be exercised by one inspector, while there are nearly 200 private slaughter-houses on the register, is evident. While I believe that the majority of butchers are desirous of assisting the authorities in so far as they are able, yet the seizures which are occasionally made bear proof to the fact that there are certain members of the trade whose consciences are more elastic, and who, if possible, will endeavour to offer meat for sale which, to say the least, must be highly dangerous to the consumer.

"The provision of a public abattoir would prevent, what I am sure must be regarded by everyone as very undesirable, viz., the cruelty which undoubtedly takes place in many of the private slaughter-houses, and also it would prevent what is equally undesirable, viz., the detrimental moral effect which the sight of animals being slaughtered must have upon the young. At present, where private slaughter-houses are situated in crowded districts, children are constantly exposed to the sight of blood, and a view of the whole process of slaughtering animals. I am aware that there are in the city a number of butchers who are unfavourable to the provision of a public abattoir, and in this they merely exemplify what has been the experience of other towns where the introduction of public abattoirs has been proposed. Such opposition is, I feel sure, founded more on prejudice than on personal experience, and one has only to make inquiries in towns already possessing abattoirs to learn that those who were most strongly opposed to the system in the first instance soon became converted, and recognise not only the advantage to the public from such institutions, but also the facilities which are afforded to themselves in the conduct of their trade. I trust that some definite decision will soon be come to by the committee on this question."

LONDON'S CONSUMPTION OF ICE.

HALF-A-CENTURY since, says the *Globe*, the amount of ice consumed in the summer in London would to-day hardly suffice to supply the needs of a single hotel in Northumberland-avenue or on the Victoria Embankment. Of course, compared with America we are still in our infancy in respect to ice consumption, for although in the last twenty years the figures have doubled, London in 1896 only disposed of about 180,000 tons of ice, whereas New York, Brooklyn, and Jersey City use up something like two million tons in the course of twelve months. There its virtues have been long recognised, here we are only beginning to appreciate them. Many a Londoner has just reached the stage when a piece of ice, if purchased at all, is placed in a room and calmly allowed to melt. The atmosphere is benefited but slightly, if at all; to no sufficient extent, at any rate, to compensate for the outlay, and the experiment is not repeated.

The history of ice consumption in London is not without interest, and it leads one to believe that in time no household, however humble, will be without a provision so necessary for the preservation of ordinary articles of food when the days are hot and the nights are sultry. Where does all the ice come from, and is it made artificially? is a very natural question, for an

answer to which we have made a few inquiries. It appears that most of that used in London is natural ice cut from the mountain lakes in Norway, and Carlo Gatti and Stevenson (Limited), who are responsible for about one-third of the metropolitan trade, inform us that not an ounce of English ice is now used. When Carlo Gatti, who, 50 years ago, kept a small ice-cream shop in Hungerford fish market, where Charing Cross Station now stands, commenced to sell the raw material, he obtained it chiefly from Hackney Marshes. Villa residences now cover the ground, but one of the storage wells then constructed there is still used by the company. It is to America we are really indebted for establishing the block ice trade, a merchant of the historic name of Tudor having, as early as 1806, sent a consignment from Boston to the West Indies, subsequently extending his enterprise to China and India. In 1844 Wenham Lake ice reached this country, but the trade only showed rapid development when it was discovered that it could be obtained more easily in Norway, some 600 instead of 3,000 miles distant.

On the lakes and fjords there has long been a regular ice harvest; those who deal in the frozen masses are termed ice farmers, and the yield of a lake is spoken of as a crop. When the ice is from 18 inches to 2 feet thick it is considered "ripe" for cutting, and a field is bought much in the same way as a merchant would treat for a crop of corn, estimating its extent and its probable yield. The first thing to be done is to clear away the rough surface of ice and snow by means of a machine drawn by horses, and known as an ice plane. After this comes the plough, to which horses are also attached, and the saw-like blades of which it is composed are set to work. The ice field is marked out in the pattern of a chess board with squares of from 2 to 3 feet. As the teeth of the saw penetrate the surface to a depth of 3 inches, the squares are readily separated by gentle tapping with wedges, or by the use of crow-bars. When parted the blocks are floated to the shore, there to be carefully stored. If the lake is not far from the ice ship the frozen cubes are passed down shoots to the water side, and where the distance is considerable, they are carted along the mountain tracks by means of sleighs in winter time. A great place for such harvests is the Christiana Fjord, and every small farmer is interested in the crops, which generally stand him in much better stead than cereal ones reared in that rocky country.

Naturally in such times as the present there is a run on the ice supply, but most of the London merchants keep a large stock in reserve, and are always equal to any demands that may be made upon them. So far this year the consumption has not been up to the average, for although the Jubilee festivities led to an increased consumption, the chilly spring was responsible for considerable slackness in the trade. It is some consolation to learn that in comparison with prime cost ice here is retailed much cheaper than in America. It is collected on the Hudson River and brought down to the great cities just as it is needed, at a freightage of only 2s. 6d. a ton, so that the New Yorker should be in a superior position to the Londoner, whose ice is brought over in sailing ships and steamers at a cost of something like 10s. a ton, suffers a wastage of 10 per cent. on the voyage, and then has to be stored here, often with the result that there is a further diminution in bulk of as much as 25 per cent. It is remarkable, however, what a long time ice can be preserved when stored in the wells and houses built for its reception in different parts of London. For instance, the company already referred to possesses a quantity of ice which is over four years old. That which Nature produces has far greater powers of endurance than the artificially made, probably because the latter is not frozen at so low a temperature, but even in the real block ice there is considerable variation in quality. That which is the outcome of a slow and regular frost is the most lasting, while ice

which has been subject to the action of the sun before the crop is gathered soon commences to crumble and fall to pieces.

It is a long while since any considerable quantity of the ice used in London in the summer time was obtained from English sources. In the old days the winters were more severe, and the chances of a supply more certain, but now the conditions have materially changed. An additional reason for going to Norway for the supply is that there is none of that risk of sewage contamination always to be reckoned with in the "home-grown" article. High up on the Norwegian mountains a good deal of the ice is actual snow water, and therefore already distilled. Some time ago the *Lancet* went to the trouble of chemically examining ice bought at the different fishmongers in London, and while it was declared in regard to natural ice that "the specimen was as chemically pure as could possibly have been expected had it been made from distilled water," some of the artificial products came in for the condemnation of very faint praise. As we have stated, the use of ice is rapidly on the increase, although at present the sale is largely confined to fishmongers, butchers, restaurants, and hotels for the preservation of food and the cooling of drinks. Here are the figures of the total metropolitan consumption for the last four years, the drop in 1894 being accounted for by the comparative coolness of the summer:—

| | | | | |
|------|-----|-----|-----|---------------|
| 1893 | ... | ... | ... | 163,000 tons. |
| 1894 | ... | ... | ... | 150,000 " |
| 1895 | ... | ... | ... | 165,000 " |
| 1896 | ... | ... | ... | 180,000 " |

It should be added that quite half the trade of the year is transacted in four months, but even in the winter there is a considerable demand for ice. Although the cost to the householder is about 5s. a cwt., it is surprising how few people make use of ice even in the hottest weather, and the majority have yet to learn how great a boon, and in the end how sure an economy, is the refrigerator. To revert once more to the United States, where, of course, the summer is uniformly hot and the temperature often higher than in this country (although American visitors have declared that in the last few weeks they have been more "tried" in London than at home), there every house, even the humblest, has its cold safe, where meat, fish, fruit, and vegetables are kept fresh and sweet at a very small cost. In New York charitable societies supply ice to the very poorest, and in the slums the local authorities distribute iced water. Fortunately, although we have our spells of excessive heat, the free drink has not become a necessity, nor is iced water used to any considerable extent.

Commencing in March, the ice which is distributed to all parts of the Metropolis is brought over to the docks in loads of about 500 tons by vessels which make four or five journeys in the season. Although contrary winds sometimes cause delay, there is never any difficulty in obtaining the block ice, and even if the present consumption were to increase five-fold, the frozen fjords of Norway would still be equal to all demands.

MARGARINE.

At Dartford Police-court, John Page Taylor, general dealer, of Stone, was summoned for selling margarine without a properly printed wrapper, and also for selling butter which was not of the nature, quality, and substance demanded, to the prejudice of the purchaser.—Evidence was given by P.C. Crouch as to his being supplied, after asking for a pound of butter, with an article that contained 75 per cent. of foreign fat.—Mr. Chancellor, who defended, pleaded guilty to selling butter which was not of the quality demanded, and not guilty with reference to the summons for not having a

proper wrapper to the margarine.—The defence was that the supply of butter had run short and defendant obtained some from a neighbouring grocer. He received this with an invoice stating that the article was butter, and this, the solicitor contended, relieved him of responsibility.—The Bench accepted the explanation and fined defendant 1s. and costs in one case and ordered him to pay the costs in the other.

A GROCER AND HIS MARGARINE.

THOMAS GRIFFITHS, who keeps a grocer's shop at Connah's Quay, was charged with two offences, viz., selling margarine as butter, and with selling it without wrapper or anything denoting that it was margarine.

Mr. T. W. Hughes, solicitor, appeared to defend.

It appears that on July 16 Inspector Robert Jones walked into his place, and looking round the shop noticed some margarine in a box, on which there was no label, and asked to be supplied with "a pound of this butter." He replied that it was not butter, but margarine. He went to the box, and said he would show him a label stating that it was margarine, but there was none on. He then said that he did not keep it for sale, and witness asked him why he kept it in the shop. He replied that he had only three sailor customers, who bought it when they went to sea, and he never sold it to regular customers. Witness asked for a pound, but defendant hesitated, and witness had to threaten that he would be prosecuted for refusing to sell to an inspector under the Food and Drugs Act before he proceeded to do so. He then begged witness to look over it, and said that it should not occur again. He then supplied the margarine to witness, placing it in plain paper and weighing it. Witness paid him 4d. for it, and told him it was for analysis, and offered to divide it, but he said he did not require it. Witness also told him that he had no right to supply it in plain paper, but that it should be put in a wrapper denoting what it was.

By Mr. T. W. Hughes: It was a grocer's shop, and the defendant had pure butter on the counter where he sold groceries, and the box from which witness was supplied with the margarine was on the floor in a separate part of the shop.

Mr. Hughes said the facts were not disputed, but his client assured him that he never offered the margarine for sale, but simply kept it for the convenience of a few seafaring customers, and that he kept it in another part of the shop entirely from where he did his grocery business.

The Bench inflicted a penalty of £1 and costs in each case, a total of £3 7s. 4d.

COFFEE.

At East Norton, on August 6, Charles A. Sharpe, of Billesdon, grocer, was charged by Superintendent Shillcock with selling, on July 8, for 4 oz. of coffee, that which was not of the nature and substance demanded.—Defendant did not appear.—Superintendent Shillcock said on the day named he sent P.C. Bissill to defendant's shop for a quarter of a pound of coffee, and immediately afterwards went and told defendant that he had purchased the coffee for analysis, and proceeded to divide it in the usual way. Defendant said, "I did not sell it as pure coffee," and the constable replied, "I asked you for pure coffee, and this is what you sold me." Defendant then said, "You have been trying a good while to catch me, and now you have got me." Witness sent a third of the article to Dr. Dyer, and received the certificate produced, which stated that the sample consisted of 70 per cent. coffee and 30 per cent.

chicory. Detendant was very abusive, both to witness and the constable.—P.C. Bissell said defendant supplied him with the article, and asked if he would have it loose or in a tin, and he preferred the former, defendant remarking that it was his own grinding. Witness paid 4d. for the article. When making the purchase, defendant said, "You are working at Rolleston Hall, are you not?" but on discovering that he was a constable said, amongst other uncomplimentary things, that had he known witness was a policeman he would have kicked him out of the shop.—Defendant was fined £2 10s. including costs.

At Holywell, on August 3, Mrs. Abigail Williams, grocer, Bagillt, was summoned by Supt. Hughes, inspector under the Foods and Drugs Act, for selling coffee containing, as certified by the county analyst, 10 per cent of chicory.—The superintendent said he had to pay a shilling for the half-pound of coffee, whereas the usual price was 8d. or 9d.—Defendant said she thought the coffee was pure, and sold it as such. She bought it ready ground.—She was fined £1 1s. 6d., including costs.

TINNED LOBSTER VINDICATED.

An inquest was held at West Hartlepool, on August 4, by Mr. F. L. Dodds, on the body of William Seago, 31, a porter employed at West Hartlepool Railway station, who died suddenly at his home, Green-street, on Saturday night. It was at first reported that deceased had died after eating tinned salmon, though what he actually partook of was tinned lobster. The evidence of Josephine Seago, deceased's widow, showed that Seago went home to tea about 3.30 on Saturday afternoon. He ate sparingly of tinned lobster, and about a quarter of an hour afterwards was seized with violent pains, and died before medical assistance arrived. Mrs. Seago added that both herself and the children also partook of the lobster, but were in no way affected by it. After hearing the evidence of deceased's father, who said that his son had suffered considerably from indigestion, the coroner remarked that whatever was the cause of death it was evidently not due to the tinned lobster, the remains of which had been produced and which were perfectly sound and wholesome, though having been opened since Saturday. Dr. Brookfield, who saw deceased after death, had not thought it necessary to make a post-mortem examination, evidently being satisfied that death was due to natural causes.—A jurymen said the report which had been published in some of the local newspapers to the effect that deceased died from eating tinned fish, was calculated to do a vast amount of harm to this trade, and he thought all reference to tinned lobster should be kept out of the reports.—The coroner said this was not advisable. They had ample proof that the tinned fish was perfectly sound and wholesome. There was not the slightest allegation against it, and he thought this fact should go before the public. There was no doubt deceased had suffered from indigestion, and the excessive heat had probably accelerated his death.—The jury returned a verdict of "Death from natural causes."

MILK.

At Yarmouth, on August 6, Robert Beare, milkman, in the employ of the Callow Park Dairy Company, was summoned for selling adulterated milk.—The Town Clerk prosecuted.—Inspector Hassall, on July 19, purchased 1½ pints of milk from the defendant on the Quay-side at Gorleston. Next day he received a certificate from the Public Analyst as follows:—Butter fat, 2.14 per cent.; solids, other than butter

fats, 5.26 per cent.; water, 92.6 per cent., showing 37 per cent. of added water.—Defendant asserted that he sold the milk as he received it; but Mr. Clowes said that the Dairy Company had a guarantee for this identical milk, and it ought not to go forth to the public that they were responsible.—Defendant denied in the box that he had “doctored” the milk.—The Chairman said that as vendor he was responsible. It was a bad case, and he would be fined 40s., including costs.

Alfred Grint, shopkeeper, was summoned for a similar offence.—The Town Clerk prosecuted, and Mr. J. A. H. Ferrier defended.—Wallace Westgate said he purchased milk of defendant at 202, High Street, Gorleston, and Inspector Hassall came in and received it. The certificate received from the analyst was as follows:—Butter fat, 3.50 per cent.; other solids, 6.81 per cent.; and water, 89.99 per cent., showing 22 per cent. of added water.—The defence was that defendant traded in a very small way, only taking about two pints each night and morning really for his own use, but supplying customers with it in soda. He sold the milk exactly as received from the dairyman.—The Chairman said that the case was a very trivial one, as defendant was in such a small way of business. It would be met by a fine of 10s., including costs.

A £10 MILK FINE AT NOTTINGHAM.

At the Shire Hall, Nottingham, on August 7, before Mr. A. Heymann (chairman), Mr. C. C. W. Tylden-Wright, Mr. E. W. Enfield, Colonel Bruce, Mr. T. Potter, Mr. A. Radford, and Mr. J. W. Burrows, a farmer living at Gedling, named Thomas Wm. Machin, was summoned by Wm Crabtree, inspector under the Notts County Council, for selling adulterated milk at Netherfield, on July 12.—Dr. W. E. Bottrill prosecuted on behalf of the Notts County Council. He said the facts of the case were extremely simple. Mr. Crabtree was an inspector under the Food and Drugs Act for the County Council, and on the day in question his assistant upon his (Mr. Crabtree's) instructions, bought what ought to have been a pint of new milk from the defendant's man for analysis. The analyst's certificate showed that there were 85 parts of milk and 15 parts of added water. He specially desired to draw their worships' attention to the fact that the defendant was a milk producer, and supplied milk dealers. By selling adulterated milk the defendant lay open the milk dealers who traded with him to be convicted. He asked the Bench to view the case very seriously.—Wm. Crabtree, an inspector under the Notts County Council, said he sent his assistant, Arthur Crabtree, to purchase milk from the defendant's man, who was going on his round with a milk cart in Curzon-street,

Netherfield. His assistant handed the milk over to him, and he went to an adjoining shop, where he went through the prescribed form of dividing the milk. The man, who was in the employ of the defendant, was named Edward Baker, and he gave witness the name of his employer.—Arthur Crabtree, son of the last witness, gave corroborative evidence.—Defendant said since the hot weather commenced the cowman had been in the habit of putting water in the churns to keep them cool. On the day in question he (defendant) poured the milk in the churns not knowing that any water was in them. Though samples of his milk had frequently been taken, it had always been found previously to be unadulterated. As it was a pure mistake he asked the magistrates to dismiss the case.—Cross-examined by Dr. Bottrill: Mr. Clarke, of Netherfield, was one of his customers, and Mr. Butler, of Netherfield, was another customer. Both these men had milk from him. He knew that these two men were recently fined for selling adulterated milk.—The Chairman (Mr. Haymann), after the magistrates had had a brief consultation, said the Bench looked upon that as a serious case, and though defendant was liable to a penalty of £20, he would be fined £10.

A SCOTCH MILK CASE.

IN the Edinburgh Sheriff Court yesterday, Sheriff Orphoot had before him the question of relevancy in the complaints by the Local Authority of Leith against Janet Morton or Hill, 4, Lorne-street; Mrs. Mary Clarkson or Murray, 63, North Fort-street; Robert Russell, 226, Leith-walk; Daniel Rose, 6A, Wilkie-place; and Peter Rice, 248, Leith-walk, all dairy keepers in Leith, who were charged with having contravened certain Acts regulating the keeping and selling of milk, and a regulation by the Local Authority of Leith, in that they had kept milk for sale where it was liable to be affected by gases; and had used their premises, which were in communication by doors with a dwelling room or sleeping apartment. There were also a complaint against David Bell Aitchison, 79, Henderson-street, Leith, who was alleged to have been guilty of the first charge directed against the others. Sheriff Orphoot gave it as his opinion that there was no case before him, as the respondents were cited to attend the Court in Leith, and the adjournment to Edinburgh was incompetent. But he might say that one of the objections he would have sustained but for that. The complaint charged the respondents with contravening regulation 20 of the regulations made by the Town Council of Leith, to the effect that, “no purveyor of milk, or person selling milk by retail, shall keep milk for sale in any place where it would be liable to become infected by gases or effluvia arising from any

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drain, sewer, cesspool, or w.c., etc." That regulation, he held, was bad on the ground of indefiniteness. What the Local Authority had done was to prohibit the keeping of milk in any place where it would be liable to become infected. It had been maintained that that order was broader than warranted. The objection was perhaps critical, but he was not satisfied that it was groundless. He preferred, however, to rest his opinion, that regulation 20 was objectionable upon the ground that it was indefinite. But, as he had already said, the opinion was "obiter," there being no case before him.

MILK AT EDMONTON.

GEORGE MARRIOTT, of 88, High-road, Edmonton, was summoned by Mr. Bridge for selling milk from which a portion of the cream had been abstracted so as to alter its quality.—Mr. Bridge said that when submitted to the public analyst the sample was certified to be deprived of 27 per cent. of its fat.—Defendant was sworn, and said that he sold the milk in the same condition as that in which he bought it.—Fined 10s. and costs, including the analyst's fee.

TOMATOES AND CANCER.

REPRESENTATIVE members of the Medical Council have once more thought it necessary to deny the popular delusion in regard to tomatoes having a tendency to induce cancer. At the Cancer Hospital in London anxious inquiries are made every season as to the truth of this belief. This year there have again been a number of verbal and written inquiries, showing that the combined medical statement of last year have not done much to combat the delusion. It may be remembered that the Medical Council issued a special opinion on the subject, the principal point of which was that "tomatoes neither predispose to nor excite cancer formation, and that they are not injurious to those suffering from this disease, but, on the contrary, are a very wholesome article of diet, particularly so if cooked."

SPIRITS.

At Lutterworth, on Aug. 6, Hannah Childs, inn-keeper, Lutterworth, was charged by Superintendent Smith with selling adulterated gin at her licensed premises, Rose and Crown Inn, Lutterworth, on July 8.—In reply to the charge defendant said she was afraid she was wrong, as she measured it in a hurry because it was near closing time.—Superintendent Smith said he purchased, through an agent, a pint of gin at defendant's house on the evening of July 8, and paid 1s. 8d. for it. He received the bottle from the agent and took it back into the house, when the defendant tried two or three times to knock the bottle out of his hand. He conformed to the usual conditions in such cases, and now produced Dr. Dyer's certificate showing that the gin was 39½ per cent. under proof, or 4½ per cent. more than was allowed by law.—Defendant was fined £5 and 12s. costs, and in default distress to issue, and if this failed, one month's imprisonment. Defendant was further informed that the question of the renewal would be seriously considered at the forthcoming license day, but the Chairman said that the magistrates on the Bench that day were decidedly averse to the license being renewed.

BATH AND ADULTERATION.

A MILK-VENDOR of Atworth, named Daniells, appeared before the Surveying Committee with reference to a report by the Inspector as to his selling milk at No. 1,

Grove-street, without being registered under the Act. Mr. Montagu's report also declared the premises as unsuitable, while a certificate from the analyst showed that the milk which the man had been selling at a penny per pint was of the poorest possible quality. Daniells, on hearing the complaints against him, expressed himself as entirely ignorant of the provisions of the Act, and the Chairman informed him that he must carry out the requirements of the Inspector. Mr. Farwell thought the man should be severely cautioned. He came into the city cutting down prices and selling stuff practically adulterated in order to get the custom of poor people in the same trade. He thought it should be put a stop to at once. The Chairman administered a caution, and the man was given to understand that if he wished to continue the business he must seek fresh premises.

MEAT.

At Southwark, on August 6, Mr. Page, a butcher, of 96, London-road, was summoned before Mr. Slade for exposing for sale certain meat which was unfit for human food.—Mr. Johnson prosecuted on behalf of the vestry of St. George the Martyr; and Mr. Washington defended.—Robert Simpson, sanitary inspector, said that on the morning of July 24, in company with Inspector Wetherall, he visited the defendant's shop. On the counter, exposed for sale, were eight pieces of beef, three legs of pork, and two heads of pork, which were unfit for food. In the basement, where sausages were made, there were two pieces of pork, three pig's feet, and 23 small pieces of meat, all of which were bad, and in addition, on a tray, were 113 small pieces of beef which were putrid. In the basement also there were three pieces of bad pork in a brine tub, and the brine itself was sour. Brine when fresh smelt sweet, and a man told the witness that in this case the brine had been in the tub five days. On the shelf there were 10 loaves and six pieces of bread, all of which were very stale and partly covered with mildew. Bread was used in the manufacture of sausages, but this was quite unfit for human food.—James Weatherall, sanitary inspector, gave corroborative evidence.—Mr. Washington, for the defence, complained that the defendant was not told that he could attend before the magistrate when the application was made for the condemnation of the meat, and give an explanation. Had he so attended, he might have satisfied the magistrate that he was not to blame. The defendant himself carried on a business of offal collecting, etc., for manure purposes, and left the management of this shop to a Mr. Hoff. On the morning in question the manager had not time to examine the meat in the shop before he went to market, otherwise the bad meat would not have been on the counter when the inspectors called. The meat was rendered bad by the smell from the brine. The thunder the previous night turned the brine sour, and the smell was sufficiently bad to give a nasty smell to the meat, which, however, only needed washing to put it right. With regard to the pieces of meat on the counter in the basement, they were simply awaiting for the arrival of the defendant's offal van to take them away. They were certainly not exposed for sale. The beef was bought the previous Thursday for 2s. a stone, the market price that day ranging from 1s. to 3s.—Evidence for the defence having been called, Mr. Slade said it was admitted by the defendant that the meat in the shop was exposed for sale. It might be, as stated in the defence, that the 113 small pieces of meat in the cellar were to be only used as manure, but it must not be forgotten that there were larger pieces of meat in the basement. If this meat was meant for sausages, well anything more unwholesome than sausages made from bad meat and mouldy bread he could not understand. Here were two summonses against the

defendant, and he would be fined £20 and 2s. costs on each case.

ON August 4, at the Middlewich Petty Sessions, John Bownes, butcher, Winsford, was fined £20 and costs for selling unsound beef for human food at the Winsford Market on July 23. It was stated that the animal had been bought for 23s., and had suffered badly from tuberculosis. The beef was described as not fit for pig's food. The proceedings were at the instance of the Winsford Urban Council.

IS OLIVE OIL A DRUG?

EBENEZAR TICKNER, a grocer, of Newington-green, Islington, was summoned on August 5 before Mr. d'Eyncourt, at the instance of the Islington Vestry, for having, on July 3, sold, to the prejudice of the purchaser, a certain drug, to wit, olive oil, which contained 100 per cent. of cotton-seed oil.—Dr. White, solicitor, prosecuted for the Vestry, and Mr. Alexander Thomson defended.—The proceedings were taken under the Adulteration of Food and Drugs Act, and the summons particularly described the olive oil as a drug.—The evidence showed that although olive oil was asked for cotton-seed oil was supplied.—Mr. Thomson raised the defence that olive oil was not a drug, and on that point asked for the dismissal of the summons.—Dr. White said that he should be able to prove that the oil was used both internally and externally.—Mr. Thomson said he had also a defence on the merits. Cotton-seed oil was an article of commerce known as olive oil.—Mr. d'Eyncourt: If you can prove that that will be sufficient.—Mr. Thomson: I would rather have an adjournment now and afterwards call expert evidence to show that this oil is not a drug.—Dr. White: And I shall call the medical officer to prove that it is a drug.—Ultimately the summons was adjourned for five weeks for expert evidence to be called on both sides.

VINEGAR.

AT Haslingden, Thomas Law, grocer, 287, Grane-road, was summoned for selling a pint of vinegar, not of nature, substance, and quality demanded by the purchaser.—Mr. J. L. Whitaker prosecuted on behalf of Supt. Procter, and Mr. Sprake, Accrington, defended.—Evidence showed that on July 5th, Sergt. Tyndall, Rawtenstall, purchased from the defendant's shop a pint of vinegar, a sample of which was certified by the analyst to contain 63 per cent. of acetic acid diluted. When served with the summons on the 15th, the prisoner said the vinegar was guaranteed on the invoice, but, on fetching the invoice by request, said he was mistaken—the guarantee was on the barrel.—Mr. Sprake said the defence was that the vinegar was sold to defendant exactly how he sold it, and was warranted.—A warranty label which had been on the barrel was produced.—Mr. Whitaker argued that there was nothing to show that the vinegar was bought as pure or that anything was said about the warranty until it was delivered. A warranty given after the purchase was completed would not stand.—Fined 5s. and costs.

MINERAL OIL AS SALAD OIL.

AT Thames, on August 5, Edward Collier, Charles-street, Stepney, was summoned by the Mile-End Vestry for selling an article which was not of the nature or quality of the article demanded.—Mr. Milner Jutsum, who prosecuted, stated that this was a very serious case. There was grave illness in a house in Mile-End, and from inquiries made it was found that it was caused by oil bought at defendant's shop.—Mr. Twaits, the inspector under the Foods and Drugs Act, went to the shop and asked for threepennyworth of best salad oil.

He was given an article which, upon analysis, was found to consist of mineral lubricating oil, which was positively injurious to health.—Defendant was fined £5.

A MARGARINE APPEAL.

AN adjourned session of the Salford Hundred Court was held at Manchester Assize Courts, Strangeways, on August 6, before Mr. Goldthorpe (the chairman) and other magistrates, to hear an appeal by Jeremiah Hanbury, grocer, Market-street, Farnworth, against a conviction of the Bolton magistrates under the Margarine Act. The respondent was Mr. W. J. Parkinson, an inspector for the Royal Lancashire Agricultural Society and the Lancashire County Council.—Mr. Overend Evans, who represented the respondent, explained that Mr. Parkinson, in the discharge of his duties, called at the shop of Mr. Hanbury, in Farnworth, on February 24 last, and bought half-a-pound of butter. He saw, on another dish, about half a firkin of what appeared to be butter, and bought half a pound of that also. He believed it to be butter, but it turned out to be margarine. Mr. Parkinson saw nothing to indicate that it was not butter. Mr. Hanbury was convicted on this evidence by the Bolton magistrates of an offence under the Margarine Act. The Act, said Mr. Evans, intended that a proper label should be visible to the person who was buying the commodity. It was a question for the Court whether the word "margarine" printed on a porcelain plaque could be accepted as a proper label within the meaning of the Act.—Mr. Parkinson gave evidence. Cross-examined by Mr. Byrne (who represented the appellant), he was in some uncertainty as to whether or not the shopman had said to him, "It is not butter; it's margarine, and it's eightpence a pound." The witness at first thought this had been said, but he afterwards corrected himself, and finally confessed that he was unable to rely upon his memory on the point.—Mr. Byrne argued that the purchaser had not been deceived. He contended that Mr. Parkinson's recollection of the circumstances was not reliable enough for a conviction.—Mr. Hanbury was called, and gave evidence in support of his own case. His chief assistant, the next witness, said that the word "margarine" was printed on the dish on which the article stood, and the word, or part of the word, was visible from every corner of the shop. In this he was corroborated by a boy employed by Mr. Hanbury, and by three customers who were in the shop at the time of Mr. Parkinson's visit. All these persons said that the word "margarine" on the rim of the white dish was clearly visible.—The Bench retired to consider the evidence, and on their return Mr. Goldthorpe said they had decided to allow the appeal.—Mr. Byrne applied for costs against Mr. Parkinson, but this was refused.

DRUGS AT CONNAH'S QUAY PETTY SESSIONS.

ABRAHAM PARRY, shopkeeper, Connah's Quay, was charged with selling spirits of nitre of a nature and substance to the detriment of the purchaser.

Inspector Robert Jones said that on the June 16 he visited defendant's premises at Connah's Quay and asked for four ounces of sweet spirits of nitre. Mrs. Parry got a bottle down from the shelf, and pointed out a label which she asked him to read, and which stated that it contained "a spirituous solution of nitre." He told her that it was for the purposes of analysis, and divided it into three parts, leaving one with her.

Mr. T. W. Hughes, solicitor, appeared for the defence, and cross-examined the inspector, who said he was in plain clothes at the time, and admitted that Mrs. Parry pointed out the label to him, saying that it was a substitute for spirits of nitre; that he made a

copy of it, and that there were printed slips hanging round the bottle neck, which they placed on every bottle in which they sold any, but no such label was put on his purchase. He admitted that he took his own bottles, and that he knew what he was buying; but, still, he asked to be supplied with spirits of nitre, and did not get it. He was charged 3d. an ounce, whereas the real spirits of nitre was 4d.

Mr. Hughes contended that there was no case, and that what was sold could not have been to the detriment of the purchaser, who knew perfectly well what he was buying, as the defendant called his attention to the fact that she did not keep spirits of nitre, and that this decoction was sold as a substitute.

The Bench considered the case rather a weak one, and dismissed it; but advised the defendant not to sell any more of the substitute, but to say straight out that she did not keep spirits of nitre.

MAIZE PROTEIDS.

T. B. OSBORNE and R. H. Chittenden published the results of an extended investigation of the proteids of the maize kernel a few years ago, and the former now records the results of some additional researches. The proteids are distinguished according to their solubilities: (a) proteids, soluble in pure water, having some of the properties of proteose; (b) globulins, insoluble in pure water, but soluble in salt solutions; (c) proteid, insoluble in water and salt solutions, but soluble in alcohol of 60 to 99 per cent.; (d) proteid matter, insoluble in water, salt solutions, and alcohol, but soluble in dilute alkalies and acids. The results of the examinations of these groups are now published. It seems quite certain that no true albumin exists in the maize kernel; the globulin formerly designated "maize myosin" is now termed "maysin," another which seems to be identical with the "albumin" formerly obtained by precipitation is referred to as "maize globulin," and a third, formerly designated "maize vitellin" appears to be identical with edestin which has been found in various seeds. The proteid soluble in dilute alcohol consists of "zein," which dissolves abundantly in ethyl alcohol of sp. gr. 0.820, forming solutions which, on evaporation in thin layers, leave perfectly transparent sheets of the proteid. In absolute alcohol, as in water, zein is wholly insoluble. It is freely soluble in concentrated glycerol, on heating to about 150° C., also in crystallised phenol, glacial acetic acid, and caustic potash solution. The total quantity of soluble proteids in one hundred grammes of finely ground maize was found to be 8.5969 Gm., and deducting from this the sum of the several proteids previously determined, viz., zein, 5 Gm., globulins, 0.39 Gm., and proteose, 0.06 Gm., there remains 3.1469 Gm. of proteid insoluble in salt solutions and alcohol, but soluble in dilute potash water. The mean percentage of nitrogen in maize proteids is 16.057.—*Journ. Am. Chem. Soc.*, xix., 525.

HOW PATES DE FOIE GRAS ARE PRODUCED.

THE famous French delicacy *pate de foie gras* is a dish made from the enlarged livers of over-fed geese, and is much relished by epicures. But everybody does not know how and with what cruelty the enlargement of these livers is procured. The "pates" come, for the most part, from Strasbourg, and, as a result, in all the country round about Strasbourg geese are raised by tens of thousands. Every farmer has many geese, and some have many hundreds.

The normal liver contains a little less than 4 per cent. of fat. The liver, artificially prepared by steadily diseasing it, contains over 50 per cent. of fat. To bring this condition of affairs about the peasants, late in the autumn of every year, get together all the geese that they can spare for the liver market. If they have plenty of room and a dark cellar, they put these geese in little cages in the dark cellar. If not, they put out their eyes

and nail their feet to the floors of the living rooms of their cottages. The geese are usually nailed in a long row in front of the open fire, so near that they suffer intensely from the heat. For six long months these geese stand or squat in the same place before the fire. Three times a day their mouths are forced open, and large balls of corn meal are stuffed and rammed down their throats until each goose is full clear up to the bill. The livers thus enlarged sell for six or eight francs each, and the carcasses for five or six francs more.

VISIT OF THE SANITARY INSPECTORS' ASSOCIATION OF ENGLAND TO BRUSSELS.

IN connection with the "Hygienic Congress" at the Brussels Exhibition, the above Association have arranged to visit Belgium early in September.

Their programme includes visits to and inspection of the sanitary works at Antwerp, Malines, Ghent, Bruges, Ostend, and Brussels.

Receptions by the Burgomaster, Aldermen, and Councillors will be given to them at most of those towns.

M. Buis, the Burgomaster at Brussels, having invited them to a reception at the Hotel de Ville on the evening of September 6th, has also placed the Militia Hall at their disposal for their meetings whilst in Brussels.

At Ostend a reception will be given at the Hotel de Ville on the morning of the 10th of September.

THE TRUTH ABOUT THE FLASH-POINT OF MINERAL OILS.

(Concluded from page 382).

When the powers of unlawful freights and trickery failed to quash rivals, then they blew them up, as is shown by the following excerpts from the New York Testimony on Trusts:—

"A TRUE INCIDENT—STRANGER THAN FICTION.

"Chas. B. Matthews, having knowledge of the trade, left his first employer (who had been 'absorbed' by the S.O. Co.), and together with a labourer named Albert pooled their savings to start a works at Buffalo, which town then offered exceptional facilities for such a step.

"The 'absorbed' employer advised him not to, and intimated that his supply of crude oil would soon be cut off if he did. Matthews, reared in the belief of American freedom, persisted, and got to work. Albert, the practical man, was therefore privately offered a bride of £4,000 to forsake Matthews, who he was told would simply be "crushed out," and so leave Albert stranded. At first Albert was firm, but by constant pressure and carefully-prepared statements, showing how Matthews must fail in his attempt, he was overcome. Being a partner, however, he could not easily, safely, or speedily get 'quit,' and, after a lot of legal intriguing, this is what he was finally bribed and bullied into doing. One still had been erected by him, while being corrupted, and this he charged with 200 barrels of oil, then plugging the safety valve with plaster of Paris and weighting it down, he continued to fire-up blindly and furiously. By one of those curious and inscrutable coincidences, the dastardly trick failed. The valve blew loose under the pressure, and the naphtha vapour rose high and clear of the works. Had the still exploded, those working near would have been killed and an appalling fire must have resulted, owing to the ignition of the vast volume of naphtha vapour suddenly released close to the furnace fire. But Albert had disappeared in the confusion. He was spirited away and paid £300 a year to keep clear of Buffalo. He soon repented, however, and got restless. They tried to kill him with drink, telling off a "boon companion" to attempt the task. But he wanted to work, and as they would not let him, he "escaped" and came back after four years to the wife he had deserted and left in poverty. Before he

could own up, however, the Standard Oil Co. found him again and tried to get him away to a job in Russia. But Albert had had too much of it, and, refusing all offers, told his tale to Matthews, who soon after got the matter into Court. He was offered by the Standard Oil Co. anything up to a Governorship in a Western State to cry off, and his attorney was told he should pave the street from the Court to his home with bricks of gold if he would throw up the case. They stood their ground, however. In Court it came out, that as Albert would not leave the country they had arranged a "shooting" expedition for him, and instructions were given to one of the party to try and arrange a "bust up." Albert would then have been paid back in his own coin, but as he did not care about a battue or big game he declined to go, and so fortunately lived to give his evidence. It took five years, however, to get the case finished, and then a fine of £50 was imposed, the criminals having been found guilty.

"One their great lawyers seriously tried to cajole the jury into believing that the gases given off in distilling petroleum were not dangerous, and had sworn testimony to support his argument that no harm would have resulted if the still had burst. So history is repeated, for this is practically what the same set are going to do before the present Select Committee on the Petroleum Laws.

"As they really fixed the standard at 73 deg. F. in direct opposition to the advice of three of our greatest authorities, it will be seen that the public safety is again menaced by no trifling enemy, but a combination of bribery and falsehood that is almost diabolical.

"It should be clearly understood that the original six of the South Improvement Co., though swollen to thirteen by passing from the Oil Trust into the Standard Oil Co., are the identical individuals who practically control the Anglo-American Oil Co., and, by the agency of the London Petroleum Association, their indirect instrument, influence Government inquiries here in England.

"A flat denial of this is only to be expected, but the facts remain the same. When the President of the Company was asked before the Trusts Congress: 'Have the company sought in any way to make the operations of the refiners outside the Trust so unprofitable that they would either have to come in or abandon business?' that President replied: 'They have not. No; they have not!' Again, the same man, when asked by the Senate if he had been in the South Improvement Company, swore on oath: 'I was not; so help me God!' Yet almost at that very moment one of his co-operators in these enterprises, being pressed on the same question before another tribunal, named this individual as the chief of the company. Shall he then hesitate to deny any controlling influences in London? It is men such as these our Parliamentary Committee would take counsel with, against the testimony of our own counsellors. It is these men who, not content with their past record, force us to allow them to send us their fancifully-named refuse oils, and with them daily immolate the poor of Great Britain on the altar of Greed."

Now in the foregoing you may think I have been prone to exaggerate, but even what I have told you will, I think, be credited when I relate you the following extract from a New York paper, in which you will find that the Oil Trust is now not only defending low-flash oil, but actually trying to persuade the Americans that gasoline is perfectly safe. Gasoline, as you see from the table, is a very light product from naphtha. This is the paragraph:—

"There has for a long time been a prejudice against the use of stoves in which the heat-generating medium is gasoline owing to the prevailing belief that gasoline is a very dangerous explosive fluid. Such, however, is not the case. To demonstrate the merits of gasoline as a fuel and prove its safety if handled with ordinary

care, tests were recently made before insurance underwriters and newspaper reporters. The exhibition was in charge of Mr. Frank Bennett, who explained the properties of the fluid to the newspaper men, answering their questions and inviting their criticisms. As being an unprejudiced account of the exhibition, we make the following extracts, which clearly show that gasoline is not the dangerous stuff it has by many been supposed:

"Mr. Bennett said that gasoline could not explode when there was a quantity of it in an ordinary oil can, even though the can should be set in the fire. In that case the liquid would boil itself away, just as water would boil.

"He said the greatest prejudice against gasoline arose from the fact that the public was not sufficiently aware of its utter harmlessness when used with ordinary care."

There is only one logical deduction. If gasoline, under the circumstances Mr. Bennett provided, is not dangerous and explosive, neither is dynamite, because it will burn quietly under certain conditions. Let him use gasoline in a stove as he proposes, and he will find that, like dynamite in a properly charged blast-hole, he has another fish to fry.

From the gasoline incident we see that they are seeking to make a market lest we do raise the standard. Moreover, this huge combine, having "*methods we know nothing of*," can surely never be at a loss to cope with so trifling a point when face to face with it. Let us ignore their bunkum and make them face it. The gradual but stealthy influence of the Oil Trust is growing here. For instance, how can a man of sense argue thus:—

One of these advisers when asked last year to explain to the Parliamentary Committee the anomaly of one standard for the Government and another for the people, he said:—"The War Office on his advice used petroleum of much higher flash-point than the legal minimum," which in every day language is the standard of safety for the people. "But that was because in dealing with an inflammable liquid like petroleum in barracks . . . exceptional precautions were desirable. He did not think, however, any necessity had been shown for the extension by legislation of like precautions in other directions.

So after mature consideration a gentleman of such experience is *honestly* convinced that for the oil burning in the comparatively few lamps used in barracks (which are practically isolated buildings) among men whose doings are regulated with clock-like punctuality, and who are compelled to be orderly by a rigorous discipline, under such conditions as these, be it noted 'a much higher flash-point' is necessary for safety, than for the oil burning in 10,000,000 lamps said to be in use every night all over the country, in crowded and over-heated rooms, by absolutely irresponsible people, who in the excessive exuberance of alcoholic hilarity, or the callous indolence bred of poverty, perpetrate fatalities nightly, under the fatuous belief that they buy and use safe oil. 'Tis strange reasoning.

Such are the relative positions of those who fight for safe lamp oils and those who advise safe oil lamps as the cure for accidents. This is a fine distinction invented by the Oil Companies in the last few years, and I commend it to your notice.

If the evidence of all monetarily and officially interested parties on both sides was tabooed, the truth of this long disputed question would soon be reached. Yet weigh the rival claims of safe and unsafe oils, the exigencies that operate for and against; and more carefully still scrutinise the motives that actuate the claimants, and then explain how it can be that in England of all countries, the spontaneous testimony of the uninterested and honest-minded is received with side-long glances of suspicion, because it is contrary to the dictates of a few millionaires, whose weapons are well known.

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BOVRIL is not merely a Meat Extract containing only the stimulative without the nutritive constituents of Beef. With the ever increasing rush of Life, commercially and socially, there arose a demand for a stimulant without deleterious after-effects; hence the introduction of ordinary Meat Extracts, Meat Essences, &c. But stimulant without nourishment simply stirs up the Fire of Life without providing for its continuance, thereby exhausting the system; the result being precisely the same as if poker were solely depended on to FEED the household fires.

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It contains the entire nutritive and stimulative constituents of Prime Ox Beef, and differs from ordinary Bovril in being more concentrated and quite devoid of seasoning, solving the great difficulty which all medical men recognise of furnishing substantial nourishment to the system through a debilitated stomach, nature being so effectively assisted that perfect digestion and assimilation is certain.

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Food & Sanitation

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THE BRITISH MEDICAL JOURNAL (August 25, 1894), says:—
“The invaluable Pasteur Filter for water actually prevents the passage of microbes of any kind, is difficult to break, and easy to clean, and its application for some years in 200,000 quarters of the French Army has shown that it is effectual in preventing epidemics of Cholera, Typhoid Fever, Diarrhoea, and similar diseases.”

M. DE FRAYCINET (Report of Minister of War to President of the French Republic, *Journal Officiel*, February 14, 1892), says:—
“Wherever the Pasteur Filter has been applied to water previously bad Typhoid Fever has disappeared.” At this date over 200,000 quarters of the French Army were fitted with Pasteur Filters.

SIR HENRY ROSCOE, M.P., Ph.D., F.R.S. (*Westminster Gazette* September 8, 1893), says:—“Ordinary filters are no good at all. The only filter that protects the water drinker from the germs is the Pasteur Filter.”

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CAUTION !!!

TAKE NOTICE that on the 6th day of July, 1897, the House of Lords (The Lord Chancellor, Lord Watson, Lord Herschell, Lord Shand, and Lord Davey)

UNANIMOUSLY AFFIRMED

the Judgments of Mr. Justice Stirling and the Court of Appeal in the Case of POWELL (trading as **Goodall, Backhouse & Co.**) v. THE BIRMINGHAM VINEGAR BREWERY CO., LIMITED, and dismissed the Appeal of The Birmingham Vinegar Brewery Co., Limited, from such Judgments with costs in favour of **Goodall, Backhouse & Co.**

Dated this 8th day of July, 1897.

J. SEYMOUR SALAMAN,

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35,981 SAMPLES were Analysed in 1892, in the LABORATORY of the

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Food and Sanitation.

SATURDAY, AUGUST 21ST, 1897.

THE PRESS AND THE SALE OF FOOD AND DRUGS BILL.

Only the *Pharmaceutical*, one newspaper journal, has found it possible to say a good word for the measure of Mr. Chaplin and Mr. T. W. Russell. The *Liverpool Mercury* says:

"The Sale of Food and Drugs Bill will give all the public analysts and wholesale and retail dealers throughout the country some interesting subjects of thought and discussion during the autumn; and when the next session opens the departmental table will be piled with

OFFICIAL ADVERTISEMENTS.

BOARD OF WORKS FOR THE LIMEHOUSE DISTRICT.

APPPOINTMENT of MEDICAL OFFICER of HEALTH and PUBLIC ANALYST.—Notice is Hereby Given that the Sanitary Committee will be prepared to receive at their Meeting to be held on Tuesday, the 14th day of September, 1897, applications for the APPOINTMENT of MEDICAL OFFICER of HEALTH and PUBLIC ANALYST for the Limehouse District, comprising the Parishes of Limehouse, Shadwell, and Wapping, and the Hamlet of Ratcliff.

The person appointed must not be more than 40 years of age, and must be a qualified medical practitioner of skill and experience, competent to undertake all the duties pertaining to the aforesaid offices, and he must possess the qualifications referred to in the Public Health (London) Act, 1891, Sec. 108.

The duties of Medical Officer of Health are prescribed by the Sanitary Officers' (London) Order of the Local Government Board, dated the 8th December, 1891, and the appointment will be made subject to the performance of such duties, and to the provisions of such Order, and also to the approval of the Local Government Board.

The duties of Public Analyst are prescribed by the Sale of Food and Drugs Act, 1875, Sec. 10 *et seq.*, and this appointment will also be made subject to the approval of the said Board, and to the applicant producing such proofs of his competency as shall satisfy the District Board, and be approved by the Local Government Board.

It must be understood that the duties of the respective offices may be added to or altered by Parliament or by the District Board from time to time.

The salary to be paid for the performance of all the duties will be £400 per annum, to include any assistance the officer may require in either of the respective offices, such salary being apportioned as follows: Medical Officer of Health, £300; Public Analyst, £100.

The person appointed will be prohibited from practising, except as a consulting physician, and will be required to reside within the district.

Applications, stating age, and accompanied by testimonials and the requisite information as to evidence of qualifications and registration, must be received by the undersigned not later than Two o'clock in the afternoon on Tuesday, the 14th day of September, 1897, the outside of the envelope enclosing the same being marked "Application for appointment as Medical Officer, &c.," and applicants must attend at the offices of the Board at Three o'clock in the afternoon on the said 14th September.

The expenses of application must be borne by the applicants. Canvassing the members of the Board will disqualify.

S. G. RATCLIFF, Clerk of the Board.

District Board Offices, White Horse Street, Commercial Road East, E., August 9, 1897.

NORTHAMPTONSHIRE.

APPPOINTMENT of MEDICAL OFFICER of HEALTH for the COUNTY of NORTHAMPTON.—The County Council will, at their meeting on the 14th of October next, APPOINT to fill the above office a GENTLEMAN possessing the following qualifications. He must—

- (1) Be a registered medical practitioner qualified in medicine, surgery, and midwifery, and
- (2) Be the possessor of a registrable diploma in Sanitary Science, Public Health, or State Medicine, under Section 21 of the Medical Act, 1886.

The salary will be at the rate of £700 per annum, payable quarterly, together with such allowances for travelling and other necessary out-of-pocket expenses as the Sanitary Committee shall from time to time approve.

He must reside at a place to be approved by the said committee, and devote the whole of his time to the duties of the office, and be responsible for the sanitary business now devolving upon or which hereafter may devolve upon the County Council.

The appointment is to be held subject to a notice of three months by either side.

Gentlemen qualified as above and desirous of the appointment are requested to send their applications with not more than three testimonials to me on or before the 8th day of September next.

Applications and testimonials must be printed or type-written, and not less than Twenty copies supplied for the use of the members of the committee.

Each applicant must state his age. Candidates are requested to abstain from personal applications.

H. P. MARKHAM, Clerk of the Council.

County Hall, Northampton, August 7, 1897.

protests and criticisms. The consumers, or those spirited individuals who watch over the interests of that long-suffering and much-neglected class of the community, will also have a good deal to say as to the shortcomings of the Bill, and Mr. Chaplin is, therefore, trying to steer a safe and even keel between the various sections of the public whose interests are in conflict will please nobody. The Bill does not do very much

to strengthen the law for the defence of the public. It gives some increased power to inspectors and to local authorities, it facilitates the examination of suspected goods, but the fine for a second offence is small, and though for a third offence it gives magistrates the power to imprison, it leaves more than half of the questions connected with adulteration untouched. The public are entitled to the most ample protection, but so is the small shopkeeper or trader against the larger merchants from whom he orders the goods he retails. The large merchant is, in like manner, entitled to protection, but most of the class to which he belongs can look after themselves. If Mr. Chaplin is desirous of dealing thoroughly with this rather complex question he will not be left without plenty of criticisms and suggestions during the recess."

The Pall Mall Gazette says:—

"The Bill for amending the Sale of Food and Drugs Acts, introduced by Mr. Chaplin yesterday, does not go very far towards meeting the recommendations of the Select Committee on Food Adulteration which reported last year, and there is little doubt that during the recess the President of the Local Government Board will be inundated with suggestions for strengthening it in several directions. The agriculturists who are interested in the limitation of the sale of margarine and other substitutes as butter will hardly regard the provisions of the bill as adequate, especially in the matter of penalties, nor will the question of warranties be fully met by the new definitions of the Bill. In taking the 'less controversial' parts of the Select Committee as a subject for legislation Mr. Chaplin will run dangerously near to satisfying nobody."

Here is the *Pharmaceutical Journal's* contribution, the bias of which probably arises from the sorry figure certain of its writers have cut when giving "expert" evidence:—

"The Sale of Food and Drugs Bill, introduced by Mr. Chaplin, is a very different production from the amateurish attempts at legislation in this direction that have been somewhat prominently before us for the past two or three years. Of course, it may bear a totally different aspect when, if ever, it becomes law. As it stands, however, it is remarkable for ignoring the claims of public analysts and for omitting all mention of the proposed board of reference. The capability and impartiality of the chemical officers at Somerset House evidently commend themselves to Messrs. Chaplin and Russell, the sponsors of the Bill, for it is proposed that articles of food or drugs shall be sent to the Commissioners of Inland Revenue for analysis, in case of dispute, practically as at present. Moreover, the certificate of analysis is to be in a form prescribed by those Commissioners, the effect of this clause being, it may be anticipated, to prevent the insertion of irrelevant matter in certificates by public analysts. The Bill will not be proceeded with this Session, but is published in order that opinions may be expressed with regard to it, and as chemists and druggists are deeply interested in the matter it is commended to their careful consideration."

The cautious *Leeds Mercury*, a journal identified with progress and a keen regard for the public weal as long ago as the Sidmouth and Oliver infamies, which its fearless editor laid bare in the House of Commons, says:—

"He (Mr. Chaplin) gravely proceeded to declare that 'the object of the Bill was to give effect to recommendations which were made by the Committee which sat on the question of food and drugs; and his object in introducing the Bill now was in order that during the recess they might be able to ascertain the general drift of opinion with regard to the question.' Now, if we thought there were any chance of this Bill becoming

law, even with the densely ignorant masses of stolid Tories, who constitute so large a part of the present House of Commons, we should proceed at once to comment upon 'The Sale of Food and Drugs Bill.' But it is too preposterously absurd, too obviously impracticable, too blatantly subversive of the leading principles of our commercial law to have the remotest chance of passing in its present shape. If Mr. Chaplin had drawn it up by himself it could hardly have been worse."

The Grocer says:—

"The Bill now before us is the merest apology for the Bill the Government were expected to introduce. Instead of dealing with the whole subject on the lines of the Report of the great Special Committee on Food, all it does is to supplement the existent Acts in a few particulars. Thus, it provides for what may be called a traders' pillory, to make an offending trader post up his own conviction on the front of his own shop! The time-limit for service of a summons is made twenty-eight days in all cases; the importation of margarine not packed 'in accordance with the requirements of law' is prohibited; condensed skim milk is to be labelled condensed skim milk; traders relying on warranty are required to give the guarantor's name and address within a week after being notified of prosecution; and the Court, on request of either party, is to send an article to Somerset House for analysis, whilst nothing is said as to whether the Somerset House analysis shall be held accurate in case of dispute. The second clause embodies recommendation sixteen of the Committee, but without the provision, strongly recommended, that when it can be proved that the master has taken all precautions for the due carrying out of the law, and the offence is the assistant's, the real culprit shall be punished. Clause 4 is simply ludicrous. It proposes to stop breaches of the Margarine Act by an absurd alteration of the size of the lettering of the word 'margarine' on the purchaser's wrapper. Does Mr. Chaplin suppose that making the letters a quarter of an inch bigger will stop these frauds? The difficulty is to get the article put into a labelled wrapper. The gang of swindlers who infest London and some of the provincial cities do not label the article at all. Sub-section 2 of this clause does certainly give a useful defence to the retailer of margarine when he is prosecuted under the Sale of Food and Drugs Act, as is now frequently done; and Sub-section 3 may, if properly enforced, help in preventing the fraudulent importation of margarine. Clause 12 puts the form of analysts' certificates in the hands of the Commissioners of Inland Revenue, and repeals the present form laid down in the schedule of the 1873 Act. Sub-section 2 is also useful. But what the Bill omits is far more important than what it does. Nothing is said as to the invoice being a warranty, or as to what constitutes a warranty. Wholesale dealers are not to be subjected to the adulteration laws; no added powers are given for enforcing the Acts; no provision is made as to the status of competency of public analysts; no board of reference is appointed; no attempt at codifying the existing laws is made; in short, out of twenty-three 'principal recommendations' made by the Select Committee less than half a dozen have been taken up, and these the most unimportant."

"Such are the features of Mr. Chaplin's Bill introduced 'in fulfilment of a pledge.' The fulfilment reminds us of the Witches' prophecy in 'Macbeth,' when they kept the word of promise to the ear of the deluded Thane, but broke it to his hopes by a paltry verbal quibble worthy of the front bench of the House of Commons."

The Western Press (Bristol) says:—

"An examination of the text of the Bill shows clearly enough that it is not of the substance and quality demanded any more than are some of the goods against which such legislation is sought. It has been referred

to as a skeleton, which may be greatly changed in appearance by that which may be put upon it before its re-introduction, or in the course of its passage through Parliament. But, with the many suggestions of the Select Committee before them, it is difficult to understand the Government, if in earnest about the matter, leaving to future or to others a responsibility it should have taken upon itself. There is at the outset a good deal to be said against the form of the Bill. We hear demands for a codification of the law, and here was certainly an occasion, when, in a new Bill, could have been introduced all the provisions desirable to secure purity of food and drugs. Instead of this, the measure merely adds another to a series of Acts on the subject, a course which does not tend to simplicity or to a good understanding of the law. One good feature is that the Bill makes it imperative on local authorities to enforce the Acts instead of leaving it to their discretion to do so, and this is perhaps the chief value. But there is no proposal to give invoices the legal effect of warranties, one of the most important suggestions of the Select Committee, and the Bill contains no hint as to the fixing of standards of purity. The measure, if it became law in the form proposed by Mr. Chaplin, would preserve those irritating anomalies of traders being convicted in one district for doing what in another is judicially held to be perfectly legitimate. The clause which on a second conviction fixes the minimum penalty at £5, may be the means of considerable injustice in view of the number of cases in which the magistrates have to give judgment on legal grounds against men they exonerate from moral culpability."

Truly, Mr. Chaplin and Mr. Russell have reason to feel proud of the reception their Bill has got.

OPINIONS OF MEMBERS OF PARLIAMENT ON THE SALE OF FOOD AND DRUGS BILL.

THE opinion of the members of the late Select Committee is that a more ridiculous Bill could scarcely be drafted. *The Grocers' Review* has had interviews with Mr. Jeffreys, Mr. Kilbride, and Mr. Lambert, and it says they had no hesitation in expressing their views to me with regard to Mr. Chaplin's Bill. Mr. Jeffreys may be said to occupy a representative position. He was recognised as the champion of the agricultural interest on the Select Committee, and his views may, without unfairness, be held to be those entertained by the agricultural party in the House. His opinions have, therefore, additional force and weight as indicating the directions in which the agricultural party will move to amend the Bill, should it be introduced next Session in its present shape. At the outset, Mr. Jeffreys acknowledges that the Bill, as drawn, contains some valuable provisions for putting a stop to, or, at all events, diminishing, the evils of adulteration. He regards with favour the imposition of a minimum fine of £5 for a second offence against the Food and Drugs Acts, and the investment of the court with discretion to inflict imprisonment, without the option of a fine, for a third offence. These alterations of the present law, if sanctioned by Parliament, will have, in his opinion, a salutary effect, though he has some doubt whether the House of Commons will view with favour the latter proposal, even discretionary as it is intended to be. As one warmly interested in the increase of the production of English butter, he approves of the provision which makes it imperative that the word "margarine" shall be distinctly legible on the paper wrapper, and of that which prohibits the importation of margarine into the United Kingdom unless packed in accordance with Section 6 of the Margarine Act, 1887. Both these provisions, if passed into law, will, he believes, have a tendency to prevent the fraudulent sale of margarine as butter. He confesses, however, that the efficacy of

the last-named provision will depend largely, if not entirely, upon the stringency with which the Board of Customs exercise the power which it invests them with. The proposal of the Bill, that every tin or receptacle containing "condensed skim milk" must bear a label, with those words in large type, also meets with his approval. But while he acknowledges that these proposals are valuable amendments of the present law, he says that the Bill is remarkable for the omission of several very important recommendations of the Select Committee. One of the omitted recommendations to which he attaches considerable importance is that which sought to forbid the colouring of margarine, or the mixing of margarine and butter when exposed for sale. These were points upon which Mr. Jeffreys laid especial stress in his examination of all the witnesses who came before the Select Committee, and he regards the failure of the Government to give any effect to the committee's recommendations upon them as a great weakness in the Bill. Another omission upon which he holds a strong opinion is that bearing upon the formation of a Board of Reference, which should be empowered to deal with the subject of prescribing limits and standards of the quality and purity of food. Mr. Jeffreys tells me that, assuming that the Bill is introduced next session in its present shape, he and other members of the House who are associated with the agricultural party will endeavour to amend the measure in these particular directions.

Mr. Lambert, who is also a representative of the agricultural interest, takes pretty much the same view of the Bill as his colleague, Mr. Jeffreys. He expresses the greatest dissatisfaction with the entire omission of any reference in the measure to the colouring of margarine so as to imitate butter. He refers me to the fact that it was on his initiative that the Select Committee agreed to recommend that the artificial colouring of margarine to resemble or imitate butter should be prohibited. Quoting from the voluminous report of the committee, he reminds me that the chairman's draft contained the following paragraph:—"If the prohibition of artificially colouring margarine would serve generally, if not invariably, as an effective check upon its fraudulent sale instead of butter, much might be said in favour of such prohibition being legally enforced; but as it appears that no such results could be claimed for such a prohibition, your committee are not prepared to recommend legislation in the direction indicated." That paragraph was, however, deleted, and on the proposition of Mr. Lambert, a new clause was substituted, which contained this passage:—"While your committee are reluctant to interfere with the manufacture of any edible commodity, they cannot, in the interests of honest trading, arrive at any conclusion other than to recommend the absolute prohibition of the artificial colouring of margarine to resemble or imitate butter." Having taken up this attitude on the committee in reference to this particular subject, and having secured the approval of the committee by eleven to five to the recommendation, Mr. Lambert says that when the Bill comes on for discussion, he will use his utmost endeavour to see that legislative effect shall be given to it.

Mr. Kilbride, who approached the consideration of the Bill from the point of view of the producer of Irish butter, did not conceal from me his dissatisfaction with the Bill generally. With the thoroughness which characterises most of the Irish members in Parliamentary matters, he says that he and those with whom he works will seek either to overhaul the Bill from beginning to end, or to prevent its passage in what he regards as its present unsatisfactory form. His objection to the absence of any provision for the prohibition of the colouring of margarine so as to imitate butter is as strong as that of Mr. Jeffreys and Mr. Lambert, but he says his energies will be concentrated on the subject of the Court of Reference, which was recommended by

the committee. The reason he assigned to me for this was that that most thorny and difficult question, and the question of vital importance to the manufacturers of Irish salt butter, namely, the presence of water in butter, is referred to this proposed new body. The committee, he points out, did not think it necessary to make any recommendations upon the question of a standard for water in butter, for the simple reason that they proposed to relegate it for decision to the Court of Reference, and he argues that unless and until that court is set up and such a standard provided these particular traders will not be free from the harrassing prosecutions to which they are at present subjected. He regards this as an essential defect in the Bill, and he will leave no stone unturned to have it remedied.

I have also been able to induce Mr. Giles, the secretary to the Grocers' Federation, to spare me a few minutes out of his very fully-occupied time in which to tell me his general opinion of the Bill from the traders' point of view. Mr. Giles has no great belief in the effectiveness of the Government's proposals. He regards the Bill as a very disjointed production, and he does not think that, on the face of it, it is calculated to satisfy any of the sections of the trade interested. There are some minor alterations in the present law proposed by the Bill which he thinks good as far as they go; but, taken as a whole, he says it may be safely predicted that the measure will not please anyone. It upsets several sections of the trade, and, in his opinion, if it ever becomes law in the shape in which it was presented to the House of Commons, it can only make the present confusion worse confounded. The subject, he adds, is sure to be discussed at the approaching meeting of the General Purposes Committee of the Grocers' Federation.

THE AUSTRALIAN RABBIT.

A SOURCE OF MUCH COMPLAINT AND ANXIETY TURNS OUT A BLESSING IN DISGUISE.

THE Australian rabbit has proved himself so unmitigated a pest to both State and pastoralists—and so expensive a pest at that—that it is refreshing to learn that money is to be made out of him at last.

Already Victoria has done much. The *Financial News* says:—She has succeeded in establishing an export trade in hares and rabbits with London that has brought over £1,000,000 of British money into the colony. Besides this consideration, an industry has arisen which affords a large amount of employment for trappers, adds considerably to the railway revenue, and provides work for a number of men in packing the rodents for export. In this respect Victoria has got vastly ahead of New South Wales. The one colony has been making a profit of £200,000 a year out of her exported rabbits, while the other has been spending £6,000 a year for the scalps of hares and rabbits that were allowed to rot on the ground where they were trapped or shot. New South Wales, however, has at length awakened to the possibilities of the situation, with the result that the first shipment of rabbits and hares from New South Wales is now due to arrive in London—if, indeed, it has not actually come to hand.

How profitable the business is may be seen at a glance. The cost of landing each hare in London is slightly under 6d., and the price realised is from 2s. 6d. to 3s. each. Add to freight 9d. per head paid by exporters to trappers for hares, and sundry other minor charges, and there yet remains a wide margin of profit. The same remark applies with equal force to rabbits, for, although the selling price is much smaller, the cost of trapping, freight, and expense in handling are in proportion.

In New South Wales it is anticipated that between 300 and 400 men will shortly be employed in trapping. In this way the industry will provide employment for

a large number of men in the country, furnish work in packing, besides contributing to the railway revenue, and, finally, will result in a considerable sum of money being returned from the sales in London. To a colony which has suffered so terribly from rodents as New South Wales this prospect must light up an otherwise clouded sky. Nevertheless, neither the record of Victoria's performance nor the promise of the mother colony's achievement in this matter can make the threat of rabbits establishing themselves in Western Australia at all palatable.

THE FOOD AND DRUGS ACT IN HUDDERSFIELD.

IN a report just issued by the medical officer of health, Mr. Ernest George Annis, it is stated that 56 visits have been paid and 28 samples of various foods and drugs have been purchased in carrying out the provisions of the Food and Drugs Act. On analysis, 10 of these samples were certified to have been adulterated; these adulterated samples were all milks, which had been adulterated by means of the addition of small quantities of water or by the abstraction of a small quantity of the fat. But as the standard for purity of milk adopted by the Somerset House authorities is so extremely low it was not thought advisable to proceed further against the vendors than by sending a cautioning letter in each case, excepting one in which a prosecution was undertaken, but the vendor was able to prove that he held a "warranty," and so no penalty was obtained.

It is greatly to be hoped that the general state of vagueness of the whole question of food and drugs adulteration will be greatly cleared up when the present Commission inquiring into the subject present their final report, as it certainly is a monstrous imposition that a person is able to sell anything they like—even "pig-wash"—as pure milk, and that no prosecution for adulteration can be successful if the person is able to prove that they have purchased it under a warranty, and that it is sold in the same condition as that in which it is received.

It is also to be hoped that the vexed question as to standards of purity will be definitely settled, so that the unedifying spectacle of conflicting scientific witnesses would be seen less seldom in our adulteration cases. It seems only rational to think that in the important question of our food supply the standard of purity could not be too high, and especially should this be the case with milk, which forms the staple food of so many people at the most important part of their lives, when it is so essential, as it were, to obtain a good start.

WHY ENGLISH PORK BUTCHERS ARE GERMANS.

WRITING to the *Newcastle Daily Journal* a correspondent ("Whist") discusses this question in the following fashion. What he has to say may apply more or less truly to the North of England, but in the South and West there are pork butchers who can take as much out of a pig as any German artist that ever filled a casing:—

"The day before yesterday I was constrained to listen for some time to a Gateshead man, on old acquaintance of mine, who was abusing in a manner little short of violent all the pork butchers, and for no other reason than that they are Germans. 'We read in the papers every day,' said he, 'about the Germans competing with us in whatever is made of wood and iron: but here they are competing with us at our own doors in selling pig's flesh to the people; and neither politician nor newspaper has a single word of objection to put in about it.' My friend, I may say, has just given up a pork business, because he did not thrive in it. Now, I hold his criticism to be unjust, because Germans do not compete with Englishmen in pork butchery. Apart from the circumstance

that, when resident here, they pay taxes and are subject, like the rest of us, to the laws of the land, the German porkmen cannot be said to compete with Englishmen, seeing that are no English pork butchers—that, in fact, our English pork butchers are all Germans. The Germans created this business amongst us, and they are carrying it on for their own benefit and ours. In every town there are many of them, and there is now hardly a village of any consequence throughout the North of England that has not one or more—clapping the pork 'sanguages' steaming hot, boiling the pigs' feet, mincing for the sausages, and cramming the 'schwarzenmagen,' as they call it, or 'sowma-whampkin,' as we used to call it. It is a case of making a business where there was none of it before, of finding occupation amongst a people who never dreamt of the possibility of such an occupation. Englishmen have all along been to blame for neglecting the pig as a subject of human food, respecting it for little more than its smoked hams, its flesh cured into bacon, its spare-ribs, and its white puddings. It is otherwise in most other countries, and particularly throughout Northern Europe—in Denmark, Sweden, Norway, and the dreary plains of Russia—where the peasant knows little other flesh-meat than pork. But the German is the porkman par excellence. He can cure swine's flesh as none other can cure it, make sausages as none other make them. Every odd and end he makes use of; every particle of skin he economises; and if there be a taste of juice in the bone he will drain it forth. There is no waste in the dressing of the long-legged German pig—every morsel is turned to account, every internal organ has its function in the preparation for the pot, and the very joints are boiled down to get jelly for the panned concoction. No English butcher can turn a pig to account for customers like a skilled German pork butcher; and this, I take it, is why our English pork butchers are Germans.

A TUBERCULOSIS CASE.

At the Burnley Police-court, on August 11, Henry Baxter, butcher, was summoned by John Nowell, meat inspector, for having meat unfit for food.—Mr. Roberts, who prosecuted, said that the inspector found that a quantity of meat weighing 200lb., belonging to the defendant, was bad, and it was subsequently destroyed.—Mr. Nowell said that the meat was dressed for sale, and was diseased and emaciated.—Dr. Dean said the animal had suffered from tuberculosis of the bowels, and was wasting away.—For the defence Mr. Waddington pointed out that the beef had been found in a cold-air stores belonging to Ralph Mason. It was not in the defendant's possession at all, and there was no evidence to show that he was a butcher.—The defendant now stated that the business was his mother's. His father had been away in South Africa, and had only just returned.—Cross-examined, he said he did not take the meat to the slaughter-house because it was soft, and he wanted to make it stiff. (Laughter.) He had got the meat from a farmer, who expected to sell it to his father.—The defendant was fined £5 and costs.

BEEF FROM COWS KILLED BY LIGHTNING

At the Liverpool City Police-court, on August 11, before Mr. Stewart, stipendiary magistrate, a cow-keeper named Harold Marshall, 41, Liverpool-road, Kirkdale, was summoned for exposing for sale the carcasses of three cows which were unfit for human food. From the evidence given it appears that Inspector Jones visited a slaughter-house in Back Castle-street, Kirkdale, on the 6th inst., and there found the carcasses of six cows cut into quarters. The meat was totally unfit for human food. Defendant told witness that the animals had been killed by lightning during the storm of the previous day.

Dr. Manley, assistant medical officer of health, stated that he had seen the meat on the 6th, and it was then in an advanced state of decomposition.

In answer to Mr. Stewart, Dr. Manley said there was little doubt that the animals had been killed by lightning. When death was caused in this way decomposition set in very rapidly.

Defendant stated that the cows were killed while grazing in the field. He got them dressed immediately, thinking they would be quite fit for human food.

Mr. Stewart imposed a fine of £10 and costs.

Defendant said he thought the fine was very hard, as he had been almost ruined by the loss of the cows.

MEAT.

At Clerkenwell, on August 10, John Stacey, of Michaelstow, Camelford, Cornwall, was summoned, before Mr. Paul Taylor, by Sanitary Inspector Billing, on behalf of the Holborn District Board of Works, for having deposited, on the 17th ult., two carcasses of mutton, which was unsound and unfit for food, at the shop No. 95, Charterhouse-street, Smithfield.—Mr. Taylor imposed a fine of £20.—John Day, of Huxham Farm, Huxham, Somersetshire, was also summoned for sending four pices of unsound beef to the same shop on July 23. A fine of £3 and costs was inflicted.

POISONING BY AUSTRALIAN MUTTON.

At Lichfield, on Aug. 13, Mr. W. Morgan (district coroner) held an inquest relative to the deaths of Ethel and Nellie Baker, aged respectively nine and six, daughters of Mr. William Baker, house furnisher, who were alleged to have died as a result of poisoning from eating Australian mutton.—Mr. Baker, who appeared very weak and ill, said that on Saturday night he purchased a leg of mutton from a dealer in Australian meat, and that it was roasted for dinner on Sunday, when all the family—his wife, himself, and five children—partook of it. They suffered no ill effects on that day, and on Monday they dined off the same joint cold. At night all of them became ill. Mr. H. M. Morgan, surgeon, attended them, but the younger child died during Tuesday, and her sister on the next day. Dr. Clark, medical officer of health, was called in, and took the remains of the meat to Dr. Alfred Hill, public analyst, of Birmingham.—Medical evidence was to the effect that the deaths had resulted from ptomaine poisoning. Mr. Morgan said ptomaines had developed in the meat after it was cooked on Sunday and before it was eaten cold on Monday. Ptomaines were a very serious form of poison, to which weak people and young children were peculiarly subject, but the knowledge as to them was yet in its infancy. Fortunately, such cases were of rare occurrence, but ptomaines might develop in meat sold by the most scrupulous and careful butcher in existence. The meat and gravy had been destroyed, but the contents of the stomachs of the children had been preserved.—The jury found that death was due to ptomaine poisoning, and acquitted the butcher of blame. They recommended the butcher to make further analyses.

TEA ADULTERATION.

At Alfreton, Ellen Lee, shopkeeper, of Riddings, was charged with having sold a quarter of a pound of "Caper" tea which was adulterated with 5 per cent. of mineral matter, at Riddings, on June 29. The defendant said that she sold the tea as she received it from Messrs. Pegg and Co., of Mansfield. Colonel Shortt, the inspector under the Food and Drugs Act, said it was impossible for the defendant to have adulterated it herself. The mineral consisted of small stones, sand, etc. "Caper" tea was a high-class tea. Col. Shortt said defendant herself was not to blame,

and he was very sorry for her. The Government authorities had passed the tea at the bonded stores; but the onus rested on the retailer, in the absence of a warranty. He asked the Bench to deal with the matter as lightly as possible. Defendant was ordered to pay 11s. and costs.

BEVERAGES IN THE RAND.

THE following returns have been handed in to the Health Officer (Dr. Visser) by Dr. Loevy, the Public analyst for Johannesburg, and were laid on the table at the weekly meeting of the Sanitary Board last Wednesday:—

SPIRITS.—Fifty-four samples of whiskey, brandy, gin, and sherry have been analysed; 15 samples were genuine liquors (whiskey, brandy and gin) of good, irreproachable quality; 33 samples sold as whiskey, brandy, or gin respectively were artificial liquors, prepared from spirit, essences, and colouring matter, mostly caramel (one of these samples contained mustard-seed); 6 samples were condemned as unfit for human consumption, owing to their containing a high percentage of fusel oil.

HOP BEER (LOCAL).—Four samples analysed; three of these were condemned as dirty, nauseous mixtures, utterly unfit for human consumption.

GINGER BEER (LOCAL).—Four samples analysed; three of these were condemned as dirty, nauseous mixtures, utterly unfit for human consumption.

WATER.—Sixty-six samples have been analysed chemically and bacteriologically; 26 were fit for drinking and household purposes, three samples were suspicious, 37 samples were contaminated, and unfit for human consumption. The majority of these samples were taken from the town supply. As pointed out in the report dated June 21, samples of town water taken at the same day and hour at different parts of the town are totally different in quality, as the following example will show:—Sample from Saratoga-avenue: appearance, turbid, yellowish, milky.

Number of developable micro-organisms in one cubic centimetre, 207, among which numerous faecal bacteria; unfit for drinking and household purposes; contaminated. Sample from Main-street, clear; 50, no faecal bacteria; fit for drinking and household purposes.

SANITARY INSPECTORS' ASSOCIATION.

CONFERENCE OF THE WESTERN BRANCH AT GLASTONBURY.

At the annual conference of the Western Branch of the Sanitary Inspectors' Association, of which the Right Hon. C. Seale Hayne, M.P., is president, Mr. MacMahon (Torquay) made some practical remarks as to the training of sanitary inspectors, on which subject he admitted there was room for great diversity of opinion. It was, however, of vital importance to their order. (Hear, hear.) Formerly it was considered by local authorities when appointing sanitary officers that no special knowledge was necessary, and that consequently an ex-policeman or reduced builder or school-master would be quite qualified to properly discharge the duties. (Laughter.) Fortunately this estimate of capacity was not frequently met with nowadays, and few authorities wishing for whole time inspectors would choose any but those having at least the certificate issued after examination by the Sanitary Institute. He ventured to hold that even that was not enough, for a little coaching for a few months would obtain that document. As their position was that of professional men, continually being called upon to give opinions and reports on questions of sanitary construction, works of drainage, water supply, ventilation, building operations, lodging-houses, cellar dwellings, the quality of food,

meat, fish, etc., and the laws of public health bearing on these matters, it seemed reasonable that a regular system of training by a course of study, both theoretical and practical, with an experienced sanitary inspector, and for a set period of time, was the best way of preparing young men to be fully qualified to take up public health appointments. (Hear, hear.) They did not frequently hear of article pupils in their profession, as was common with town surveyors, architects, and solicitors, but he believed this to be the only sound method. A good education was almost indispensable if they expected public attention to their notices and reports. A knowledge of land surveying and of making sketch plans would be an acquisition, and helpful in illustrating cases that were taken before the magistrates. Having indicated the special subjects to which a youth's training should be directed, he urged that he should seek to acquire tact, which was a splendid attribute for a sanitary inspector, and great pains should be taken to become possessed of it. In negotiating with different people conciliatory methods must be cultivated. This, coupled with a thorough knowledge of the work, would generally render their otherwise disagreeable duties tolerable. (Applause.)

SANITARY ASSOCIATION OF SCOTLAND.

THE annual sittings of the above organisation are to be held in Dundee this year, and will extend from the 25th to the 28th inst. On the evening of the 25th the annual business meeting will be held in the Burgh Court-room, and the following day the conference proper will be opened by Lord Provost M'Grady, the hon. president, who will welcome the delegates to the city and deliver an address. This will be followed by an address by Mr. Gilbert Thomson, C.E., Glasgow, the president-elect, on "Recent Developments in Sewage Purification." After luncheon a paper on "River Pollution" will be read by Bailie M. Dechan, public analyst, Hawick; and Councillor Elliot, Dundee, will deal with the subject of "Recent Sanitary Improvements in Dundee." A short discussion will follow, and at 4.15 p.m. the members will be driven to places of interest in the city, while in the evening the annual dinner of the Association will be held. On the day following the conference will be resumed. The opening paper will be read by Dr. Charles Templeman, Dundee, on "The Prevention of Disease by Inoculative Methods," and the next speaker will be Dr. T. G. Nasmyth (medical officer of health, Cupar Fife), who will have as his subject "Dairy Sanitation and Legislation, and an Account of the Copenhagen Milk Supply Company." A paper on "The Inspection of Meat" will be contributed by Professor Dewar, of the Royal (Dick) Veterinary College, Edinburgh. At one o'clock the members will be entertained to luncheon by the Lord Provost, Magistrates, and Town Council, and the afternoon will be devoted to papers on "The Food and Drugs Act" and "Obstacles and Incidents in the Work of the Sanitary Inspector," the speakers being Councillor Maclay (Glasgow) and Mr. John Frew (sanitary inspector, Linlithgowshire). At the close of the sederunt the members will drive to the Loch and Crag of Lundie, and there tea will be provided. The Saturday forenoon will be devoted to a sail on the river.

MILK.

At the South-Western Police-court, William Carter, dairyman, of 224, High-street, Merton, was summoned, at the instance of the District Board of Works for Wandsworth, for selling milk from which 37 per cent. of the fat had been abstracted.—The defendant admitted the analysis, and alleged that the milk was sold as skimmed milk. He had several rounds, and he always sold skimmed milk on the Tooting round.—Mr. Hopkins: Rather hard on Tooting.—Defendant: They need not buy it.—A fine of 20s. and 12s. 6d. costs was imposed.

A BURST BATTLE.

A POINT of some interest was raised on August 16 during the hearing of a summons against a local dairyman named Gravestock, for milk adulteration, before the Eastbourne magistrates. In the course of the evidence for the prosecution, conducted on behalf of the Town Council by the Town Clerk, it transpired that, although the milk when purchased by the sanitary inspector was divided into three portions, the inspector was unable to produce the sample retained by himself, the bottle having in the meantime burst. The broken portions of the bottle were produced a week previously, when the case first came up for hearing, and as the adjournment was taken to suit the convenience of the defendant, the prosecutor claimed that he was entitled at that adjourned hearing to credit for having so far complied with the statute on the first occasion. Mr. Ricketts, for the defendant, submitted that the inspector's sample as thus produced was unfit for analysis, and that its production under these circumstances was not a compliance with Section 25 of the Sale of Food and Drugs Act. Mr. Fovarque, the town clerk, argued that the prosecution had done their best to fulfil the requirements of the statute; the breaking of the bottle was an accident. Mr. Ricketts objected that the statute made no provision for any accident of this description; and, as to what the prosecution had done to comply with the Act, he submitted that the sample might have been put into a stronger bottle. The Mayor said the magistrates were not in a position to dispute the point raised by Mr. Ricketts. They had no doubt that the statute had not been strictly complied with, and the case would, therefore, be dismissed. Mr. Fovarque stated that, having regard to this decision, he should advise the Sanitary Committee to remit the fine imposed in the case of the other defendant, who might have, but did not, avail himself of a similar objection; and he reserved the question of applying for a case for the High Court.

SPIRITS.

At Leyland, on August 10, Alice Walne, of the Wheat Sheaf Inn, was summoned for selling adulterated rum on the 8th ult.—Mr. Booth defended.—Sergeant Jackson stated that on the date named he purchased a quantity of rum at defendant's house, the liquid when analysed was found to contain four degrees excess of water.—Mr. Booth said the four degrees referred to could easily be accounted for by the obscurity and the evaporation caused by a defective tap.—Superintendent Norris did not press the case, and the defendant was ordered to pay the costs.

SUPPOSED CHOLERA IN BETHNAL GREEN.

DR. STYLE, of Cambridge-road, E., who was called in to attend a girl named Ada Sandford, whose death has been attributed to cholera, has stated that the case was only one of the kind that had come under his notice in London. The case presented all the symptoms of cholera during life, and after death the characteristic features of cholera were observed at the *post-mortem* examination. Whether the disease was true Asiatic cholera or simply an especially virulent example of the variety known as English cholera he could not say with absolute certainty, because he had not submitted the intestines and their contents to a bacteriological examination. This was at present being undertaken by the Home Office experts, but without in any way attempting to forecast the results of their investigations, Dr. Style considered that the extremely low temperature of the body (94 deg.) and its blue colour all over while the disease was in progress were only consistent with Asiatic cholera. There was an abnormal amount of diarrhoea in the district, and the infant mortality from this cause had been great, but Dr. Style

said he had never known an adult to die in a few hours from this complaint or from English cholera. Dr. Plews, of Bishop's-road, Cambridge Heath, who was present at the *post-mortem* examination, said he deprecated all idea of desiring to create panic, but he thought that the girl Sandford had almost undoubtedly died from Asiatic cholera. It may have been only a sporadic instance, and in any case there was no cause for alarm, because of the prompt measures of disinfection that had been adopted. The girl was in every way healthy and well-nourished, and had the disorder with which she was attacked been simple English cholera she should speedily have revived under the prescribed treatment. But there were so many specific characteristics of Asiatic cholera present that he had no doubt this disease was the cause of death. He awaited the result of the bacteriological examination to confirm his conclusions.

THE PROPERTIES OF MATE (PARAGUAY TEA).

As to the effect of maté on the organism, all the physiologists are unanimous in their claims. Dr. Caminha, basing his statements on the comparative analyses executed by Dr. Peckolt with samples of tea, coffee, and maté, concludes that the latter is less exciting than the two others, a small quantity of essential oil entering into its composition. Besides, containing less resinous substance than green or black teas, and more than coffee, its diuretic action is greater than that of coffee, and as a stimulant it rivals green tea.

The proportion of alkaloid contained in maté varies, according to the species and place of origin, from 0.5 to 16.75 grams per kilo. In the Paraguay species the proportion is generally 7 to 9 grams. According to a communication of M. Paul Macquaire, of the Academy of Medicine (*La Nature*), this alkaloid is said to be identical with caffeine; according to M. Moreau, of Tours, it is different. The former bases his statement on the fact that the melting point of the alkaloid obtained from maté (matéine) and that of caffeine are the same. The second gentleman appeals to the differences presented by the crystals of these two bodies and to the fact that matéine acts directly on the muscles, whereas the caffeine does not influence them though acting on the nervous centres.

Be this as it may, the beneficial effects of maté are beyond doubt; it augments vital activity in all its forms; taken in large quantities it does not provoke insomnia; finally, it is a food of double value, in that it corrects malassimilation and contains certain assimilable principles.—*Bulletin of Pharmacy*.

BELFAST CORPORATION AND THE APPOINTMENT OF SUB-SANITARY OFFICERS.

THE METHOD OF EXAMINATION.—AMUSING DISCLOSURES.

At a recent meeting, Councillor Young moved:—"That it be an instruction to the Public Health Committee to report fully upon the method adopted for the selection of men for the appointment of sanitary sub-officers for the seven vacancies recently filled up, and to furnish each member of the Council with a copy of the Candidates' answers to the questions given on the examination paper." He said that on January 16, 1896, it had been resolved by the Corporation, on the motion of Councillor Barklie, that all appointments on the sanitary staff be in future made the result of competitive examination, the subjects of examination to be writing, arithmetic, elementary mensuration, hygiene, elementary chemistry and elementary construction, the medical officer of health to report on the suitability of the candidates for the position, the examination to be conducted by two members of the committee appointed for the purpose, the medical superintendent officer of

health, and the executive medical officer, and the limits of age to be 20 to 40 years. Subsequently it was resolved that in the examination of candidates the papers should be prepared by the two chief officers of the department, and that Councillors Barklie and Bigger be appointed to be present during the examination. Councillor Young went on to refer to the increase in the number of sub-sanitary officers in Belfast, and the advertisement for candidates which subsequently took place, and then quoted the following in the *News-Letter* of June 18, in which the questions for examination in the competition for the appointments referred to were published. The first of the questions was, "What is a thermometer? What are its uses? What are the scales by which it is divided?" (Laughter.) A good many officials of the Corporation could not answer that. (Hear, hear.) Another question was, "What is density?" (Renewed laughter.) The next question was, "What is the composition of air? Is it always uniform; if not, why not?" (Laughter.) Councillor Young, having read out some of the remaining questions, said that the first twelve questions would do for a student that had matriculated, and the second twelve could be answered by nothing short of a professor. The man who could answer all the questions ought to have been asked a few more. He should have been asked to box the compass, to repeat the Thirty-nine Articles, the Westminster Confession of Faith, and the Shorter Catechism—(laughter)—and then they would have both a religious and a scientific sub-sanitary officer. (Laughter.) Councillor Young then read a letter which Councillor Barklie had written to the *News-Letter* on June 18, stating that no member of the Public Health Committee had anything to do with the examination or the setting of the questions for the candidates. Continuing, Councillor Young said he was further informed that some of the candidates were allowed another day to go round to some public institution to read some books in order to see how the questions should be answered. (Laughter.) A number of the papers gave one the idea that they had been copied out of some book, and to have been written by the one individual. Councillor Young then, amid great laughter, read a poem, published in the *Irish News*, on the subject, and signed by "Thomas Millar." Continuing, he said that from one department of the Council three officers were appointed out of the seven selected. In his opinion, the ninety candidates ought to have an opportunity of having their papers properly examined. The questions put to the candidates were ridiculous. They were questions that no member of that Council could answer, and the examiners could not answer them without a book. The Corporation had been made the laughing-stock of Ireland—that they wanted men at 25s. a week to know more than those to whom they were paying £600 a year.

CORRESPONDENCE.

FLIES, &c., IN BAKEHOUSES.

To the Editor of FOOD AND SANITATION.

SIR,—Bread is the staff of life, especially amongst those whose means are limited, but it is produced in some of the vilest holes I ever saw in all my life; infested, as they are, with flies, cockroaches, and crickets, nothing can compare with an ordinary bakehouse for all that is nauseating and disgusting.

I have frequently found a cockroach embedded in the middle part of a loaf, and to find flies is a common occurrence. Your excellent paper is not a trade paper, but one which goes to the public, and it is for the benefit of the public at large that I write, so that anyone having any cause to grumble about the things I refer to may be properly instructed as to how to tackle the baker who offends.

Whitewash is an enemy to flies or maggots. Very few bakers are aware of this. If they were, their walls would not be so black. A well-swept floor has no attractions for a fly; a few grease spots will attract hundreds.

A liberal use of chloride of lime is to be commended in bakehouses. I have called upon bakers for years, and have seen a man before now working up dough for the oven so surrounded by clouds of flies that his face was not distinguishable. As to crickets, &c., they can be caught in a trap. Anyone troubled with these insects should write to W. B. Fordham and Sons, King's Cross, London, N., for the name of the nearest agent to the writer who sells these traps. Flies can be kept down, and sometimes exterminated, by energetic means. What steps to take I will gladly indicate to any of your readers who would like to know, and who, in writing, will be good enough to enclose a stamped envelope for reply.—Yours, &c.,

A. W. TRENNERY.

57, St. George's-road, Bristol,

August 17, 1897.

ADULTERATION OF FOOD.

To the Editor of FOOD AND SANITATION.

SIR,—The Bill to amend the Acts relating to the Sale of Food and Drugs has at last been brought in and read a first time. Happily, however, force of circumstances and the will of the Government prevent it from being proceeded with further at present. The first question that everyone reading the Bill will surely ask will be, Why this further patch on the Statute-book? Why this unnecessary deviation from the bent of modern legislation to consolidate? There are at present nine different Acts dealing with the adulteration of food, irrespective of those covering beer, seeds, and feeding stuffs. The enforcement of four of these is left to the Inland Revenue Department, and the remaining five to Town and County Councils, Vestries, and so forth. Are we to have one more Statute added? Surely on a matter such as this, one on which there is no Party faction, a thorough consolidating measure with a common basis of controlling authority would at least have been expected. But there is yet another disappointment to all who have studied this question, and indeed to the public in general. One would have presumed, though apparently fallaciously, that whatever Bill was introduced it would have followed on the lines of the Report of the Select Committee appointed to inquire into the workings of the various statutes. At the end of that Report (published in July, 1896) is tabulated a summary of "Principal recommendations" numbering 23, some more important than others, but all the outcome of a careful consideration of the evidence brought before the Committee. The inquiry, as is stated at the commencement of the Report, was initiated in the Session of 1894, continued in 1895, and completed in 1896. Thirty-three sittings were held and 68 witnesses examined. The Report was unanimous. This Bill, however, a short one of 13 clauses, deals with no more than three and a half of the 23 "principal recommendations." Where are the other 19½? Are they worthless, and the time and trouble expended waste? Or is this Bill merely a dummy for the purpose of enabling the Government to say that a Bill has been introduced during the past Session? It can be no surprise that such a Bill is put forward at the eleventh hour. But it is sincerely to be hoped that when Parliament meet again the Government will think fit to propound some more comprehensive and useful measure to deal with this all-important and far-reaching subject of the adulteration of food.—Yours, etc.,

DOUGLAS C. BARTLEY.

3, Hare-court, Temple, August 12.

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Food & Sanitation

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CAUTION !!!

TAKE NOTICE that on the 6th day of July, 1897, the House of Lords (**The Lord Chancellor, Lord Watson, Lord Herschell, Lord Shand, and Lord Davey**)

UNANIMOUSLY AFFIRMED

the Judgments of Mr. Justice Stirling and the Court of Appeal in the Case of **POWELL** (trading as **Goodall, Backhouse & Co.**) v. **THE BIRMINGHAM VINEGAR BREWERY CO., LIMITED**, and dismissed the Appeal of **The Birmingham Vinegar Brewery Co., Limited**, from such Judgments with costs in favour of **Goodall, Backhouse & Co.**

Dated this 8th day of July, 1897.

J. SEYMOUR SALAMAN,

65 and 66, CHANCERY LANE,

LONDON,

Solicitor for **Messrs. Goodall, Backhouse & Co., Leeds.**

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Food and Sanitation.

SATURDAY, AUGUST 28TH, 1897.

EXTRAORDINARY DEATH RATE IN BIRMINGHAM.

THE death rate in Birmingham last week reached the extraordinary height of 43. The Registrar-General reports that the annual rate of mortality in 33 great towns of England and Wales last week averaged 29.5 per 1,000 of their aggregate population. The rate in Birkenhead was 33, Blackburn 20, Bolton 20, Bradford 27, Brighton 27, Bristol 18, Burnley 30, Cardiff 22, Croydon 16, Derby 25, Gateshead 26, Halifax 15, Huddersfield 16, Hull 28, Leeds 35, Leicester 34,

Liverpool 41, London 26, Manchester 38, Newcastle-on-Tyne 27, Norwich 25, Nottingham 32, Oldham 21, Plymouth 33, Portsmouth 24, Preston 42, Salford 39, Sheffield 38, Sunderland 25, Swansea 14, West Ham 31, and Wolverhampton 34. The rate in Edinburgh was 14, Glasgow 22, and Dublin 26. From a glance at these figures it will be seen that the rate of mortality in Birmingham is higher than elsewhere. Such a state of affairs, says *The Birmingham Mail*, is serious enough in itself, but when viewed in conjunction with what has been going on during the past five years, a grave responsibility rests on the city health authorities. The death rate in Birmingham last year was worse than in either of the five previous years, and there is a prevailing opinion that unless the existing sources of insanitation are removed the rate of mortality is bound to increase. Dr. Hill, in his recent report, says: "Three points now appear to me to be of great importance in any efforts that are to be made for the sanitary welfare of the town. One is the provision of freer circulation of air in and around dwellings; another is the abolition of intercepting methods of dealing with excreta, and the other the better cleansing of yards, passages, and out-houses in the poorer parts of the city. The first of these points can only be met by the demolition of a certain number of houses, where they are too crowded to be healthy. The second point involves the conversion of the privies at present arranged on the conservancy system, into water-closets. The third point should be dealt with by arranging for the cleansing, at the public expense, of all those courts in which this appears necessary to the sanitary staff." There is another source of mischief, however, which will have to be dealt with if the city is to be ridded from a yearly scourge from zymotic diseases. It is seriously asserted that the Birmingham sewers are treated in a manner which conduces to the generation of sewer gas, and that it is the presence of this poisonous gas in the atmosphere which is responsible for the heavy death rate which marks each recurring autumn. It is well known that the surfaces of many of the Birmingham sewers are uneven, and that this prevents the channels being kept clear. However, if the sewers had to deal only with excreta they could be properly flushed. The health authorities, however, lend their sanction to the present system of scavenging, which puts on an average eight hundred tons of mud into the sewers each day. There were over 30,000 tons of mud sent down the sewers during last month, or nearly double the quantity in July in 1887. It must be remembered that we had dry weather during last July, so that the whole of the mud had to be swilled down the sewers with the aid of millions of gallons of water. The very presence of street sweepings in the sewers stops the flow of sewage, and so fermentation supervenes, and with the aid of the shafts the noxious gases are introduced into the atmosphere of the city. In cleansing the streets sufficient water might be applied to permit the removal of the dirt on the surface, and it is suggested that after the water had drained from the sweepings the refuse should be collected and destroyed. At the present time the roads are flooded and the refuse finds its way into the drain. There is a rumour that the authorities have begun to awaken to the fact that they have been pursuing a wrong policy, and a conference between some of the expert officials has been arranged with a view of adopting a scheme which will free the sewers from the great mass of mud each day, and so allow the channels to be kept clean and free for the discharge of their proper functions. A correspondent points out that the street refuse could be dealt with more economically in destructors than when mixed with millions of gallons of water. In view of the increased mortality during recent years a matter of this importance warrants the prompt attention of the Health Committee.

BIRMINGHAM AND ADULTERATION.

DR. ALFRED HILL reports:—

"During the past three months I have received 258 samples under the Food and Drugs Acts. Of these 222 were submitted by Mr. Jones and 36 by Mr. Parker.

"The following list gives certain particulars of the articles received and the results of the analyses:—

"Milk, 87, 62,* 25; coffee, 38, 33, 5; medical prescriptions, 36, 27, 9; butter, 21, 20†, 1; cocoa, 10, 0, 10; granulated sugar, 9, 9, 0; flour, 8, 8, 0; root ginger, 8, 8, 0; ground ginger, 6, 6, 0; gin, 6, 6, 0; beeswax, 5, 4, 1; cream of tartar, 5, 5, 0; sal volatile, 4, 4, 0; bread, 4, 4, 0; Demerara sugar, 4, 4, 0; Irish whiskey, 4, 3, 1; Scotch whiskey, 2, 2, 0; paregoric, 1, 1, 0.
* Twenty were of low quality. † Five contained boric acid.

"Of the 258 samples, 52, or 20 per cent., were found to be adulterated. This proportion is above the average, owing to the number of milks, cocoas, and medical prescriptions condemned as unsatisfactory.

"MILK.—Five samples of milk contained excess of water, six samples were deficient of fat, and four were both watered and creamed, the total being fifteen samples or 17 per cent. of adulteration in these ways. This proportion is rather worse than in the second quarter of last year, when the corresponding figure was 14 per cent. Four other milks contained from 20 to 40 grains of boric acid per gallon, and six more were certified as adulterated owing to the presence of formic aldehyde. Although only a very small proportion of formic aldehyde is added to milk as a preservative, I consider its addition to be an adulteration, because it is a substance which has not been proved to be free from injury to the health of the consumer, and which being foreign to milk renders it, in the words of the Food and Drugs Act, 'not of the nature, substance, and quality of the article demanded.' When milk is asked for by a purchaser, milk, free from preservatives, is required, and a vendor has no right to supply an article containing them unless the consumer is informed of their presence. Besides these samples of milk twenty others were low in quality, containing less than 12 per cent. of total solid matter. The average composition of the whole of the milks analysed in the quarter, including even the largely adulterated samples, was 12 per cent. of total solid matter, including 3.5 per cent. of fat.

"The vendor of sample No. 376 promised the magistrates to give up the sale of milk, and was only ordered to pay the costs of the prosecution. No. 555 was described by the vendor as 'skimmed,' but it was moreover adulterated with 11 per cent. of water, and only partly skimmed.

"BUTTER.—Sample No. 335 was adulterated with 95 per cent. of foreign fat, and the vendor was fined £5, and 10s. costs. Five samples contained boric acid, the other 15 samples of butter received this quarter were genuine.

"COFFEE.—Fivesamples of coffee, or 13 per cent., were adulterated with chicory, the average of the amounts of adulteration being 24 per cent. of chicory. Two other samples contained traces of chicory. This is an improvement on the previous quarter, when 22 per cent. of the samples were adulterated. The average of the amounts of adulteration then was also higher, being 59 per cent., and all the vendors were fined.

"COCOA.—Each of ten samples were adulterated with large quantities of sugar, and sago or arrowroot. Such articles should be sold as cocoa mixtures, and properly labelled. I consider that a vendor has no more right to sell as 'cocoa,' a preparation of which only half, or less than half, is genuine cocoa, than to sell as 'coffee,' an article containing 50 per cent. of chicory. In two cases alkali had been used in the preparation of the cocoa.

"SPIRITS.—The two samples of Scotch whiskey were 23½ deg. under proof, three samples of Irish whiskey

were 18½ deg., 20½ deg., and 23½ deg. under proof, all being above the legal minimum strength. A sample of Irish whiskey (No. 515), was 27.7 deg. under proof, being adulterated with 3½ per cent. of water, and the vendor was cautioned by the Health Sub-Committee. The six samples of gin did not contain excess of water, though one of them was just within the legal limit, being 34½ deg. under proof, the law allowing a minimum of 35 deg.

"GINGER.—The six samples of ground ginger were of satisfactory quality, neither containing excess of mineral matter nor being adulterated with exhausted ginger. Six of the eight samples of root ginger were coated with from 1 to 2 per cent. of a mixture of lime and lime salts, either carbonate or sulphate. This addition is unnecessary and undesirable, but I could not certify them as adulterated on account of it. The other two samples seemed to have had the lime coating washed off; a small portion of each was suspicious in appearance as if it had been treated with a solvent, but I was not able to say definitely that such was the case.

"MEDICAL PRESCRIPTIONS.—On the 4th of May I received thirty-six medicines dispensed from seven different prescriptions. There were sixteen samples of mixtures, thirteen samples of pills, and seven samples of liniment. Particulars are given below:—

"Mixtures.—Seven samples of the mixture containing iodide of potassium and liquid extract of cinchona were received, four of which were of the correct composition or nearly so. No. 404 only contained 75 per cent. of the amount of iodide of potassium ordered, and was also deficient in cinchona. No. 414 contained only 85 per cent. of the proper amount of iodide of potassium, and No. 406 had an excess of 10 per cent. of this drug.

"One of the six mixtures containing butyl-chloral hydrate, glycerine, and tincture of cardamons was somewhat deficient in strength, but, owing to the absence of an adequate official standard of purity of the active ingredient, I could not call it adulterated. Four of the samples were purple in colour, and two were brown; this great difference in appearance is due to the British Pharmacopœia allowing butyl-chloral hydrate to be neutral or slightly acid in reaction, to the presence of tincture of cardamons, and to ordinary water being used. The Pharmacopœia requires that 'in dispensing prescriptions, *acqua* should be understood to mean distilled water.'

"The other three mixtures were prepared from a prescription ordering a quantity of morphia too small for analysis.

"Pills.—Three of the five samples of carbonate of iron pills were correctly dispensed, but No. 422 only contained 25 per cent. of the carbonate of iron that should have been present; this deficiency was not due to deterioration by oxidation. No. 338 consisted of iron, or Blaud's, pills, instead of carbonate of iron pills. Although the two preparations are similar in nature, the substitution of one for the other cannot be justified.

"The four samples of iron and quinine pills contained the correct amount of quinine, but No. 439 contained an excess of 80 per cent. of sulphate of iron. This may have been due to the dried salt having been used in error.

"Four samples of pills were made from a prescription ordering squill, ammoniacum, benzoic acid, balsam of Peru, and opium. Owing to the complexity of the ingredients and the small quantity (ten grains) received, analysis was impossible.

"Liniments.—Four of the samples of liniment of camphor were of full strength, but three (Nos. 407, 415, and 417) only contained 75 per cent. of the camphor that should have been present. This deficiency may have been due to the careless preparation of these samples.

Olive oil had not been used in the preparation of No. 415.

"**DRUGS.**—Three of the five samples of *beeswax* were genuine, another was nearly so, containing a small quantity of stearic acid, while No. 373 I certified to be adulterated with at least 25 per cent. of paraffin wax, and at least 10 per cent. of resin. It was composed of two pieces, one of which was chiefly resin and paraffin wax, the other was adulterated with about 30 per cent. of paraffin wax and a little tallow. The vendor was fined 1s. and 8s. costs.

"The five samples of *cream of tartar* all contained traces of lead, but not in sufficient quantity to be called adulteration. One of the four samples of *sal volatile* was slightly deficient in strength. The single sample of *paregoric* was genuine.

"**LEGAL PROCEEDINGS.**—Thirteen vendors of adulterated articles have been cautioned by your Committee, twenty-five were prosecuted and fined, and in one case the vendor was only ordered to pay the costs of the prosecution.

"The average fine inflicted was £1 14s. 11d. The legal costs paid by the vendors amounted to £11 17s. 0d."

GUINNESS'S STOUT.

At Dublin, on Aug. 20, Mr. Joseph Grant, of Albert-place, 1, Grand Canal-street, and 19 and 20, Upper Grand Canal-street, was summoned by the firm of Messrs. Arthur Guinness and Co. for having committed a breach of the Merchandise Marks Act in selling on his premises as double stout that which was not double or extra stout.—Mr. O'Shaughnessy, Q.C. (instructed by Messrs. Sutton and Son), prosecuted.—The defendant was undefended.—Mr. O'Shaughnessy said his clients had prosecuted the defendant under the 20th Section of the Merchandise Marks Act, and the facts were that on the 10th of June a set of samples were taken up, and on the 26th of July a second set were taken up. On the first occasion the article which they complained of being sold was sold under the representation of Guinness's stout, and so was the second. The company had gone to enormous expense to have these cases properly and completely proved. The firm sent out two articles, one of the gravity of porter and the other of the gravity of extra stout, and it would be proved that what was sold was not what it was represented to be. The prosecution was brought not merely in the interests of the firm of Guinness, but in the interests of the honest trader.—The defendant: I know not one single thing about it.—Mr. O'Shaughnessy: I can only say that neither the defendant nor any other offender will have an opportunity of repeating the offence.—Mr. A. Forbes Watson, chemist to Messrs. Guinness, was examined, and stated that he examined the samples purchased by the last witness from the defendant's shop, and found that they were not the stout which they were represented to be—neither was the extra stout of Arthur Guinness and Son. The sample of July 26 given to him by Phillips was not what was represented, and had had added to it water or some deteriorating element. Witness gave the specific gravity of the Guinness article and that of the samples.—The defendant said if a mistake was made it was simply caused by the fixing of a wrong label on the bottle by mistake.—To Mr. Watson: Do you say there was water added to it?—Mr. Watson: There was water added to it, or it was of less original gravity than Guinness's stout.—Mr. Swifté asked the defendant if he desired to say anything.—Mr. Grant said the whole thing was the result of a mistake.—Mr. Swifté: You are responsible for the acts of your assistants.—Mr. Grant: I am sorry that the Messrs. Guinness should proceed against me after my 30 years' dealing with them, and spending £2,000 a

year with them.—Mr. O'Shaughnessy: We don't care if you spent £3,000 with us, we won't have these frauds committed.—Mr. Swifté said he would hear the other cases before giving his decision.—Mr. O'Shaughnessy said the next case was against Mr. James Dodd, of 1, Mountjoy-street and 100, Dorset-street, and the samples obtained were not what they were represented to be.—Mr. O'Connell Miley, solicitor, appeared for the defendant.—Mr. O'Shaughnessy said that the bottles produced, and which contained the samples in question, held out the representation that the contents were Guinness's extra stout, and they were found to be ordinary porter. The offences immediately in point were committed on June 9 and July 24. The profit arising to the defendant in the case of Dorset-street would amount to—Mr. Miley objected, unless what counsel stated would be made evidence. Mr. O'Shaughnessy said the profit accruing to the defendant by the substitution of one article for another, as in this case, was 50 per cent. over the legitimate profit, a most scandalous state of things. The company were prosecuting in this and the other cases, not caring a farthing whether the defendants dealt with the firm or not, and the company would not again supply the defendants with their stout.—Mr. Miley: Your clients have deteriorated the stout themselves.—Mr. O'Shaughnessy: That statement is not true.—Mr. Phillips was again sworn, and in reply to Mr. O'Shaughnessy deposed that on the dates in question he visited the premises of the defendant and purchased the samples of stout, which he subsequently gave to Mr. Watson, the Brewery analyst. The bottles which he purchased in Mountjoy-street were labelled "Guinness and Co.'s Double X Stout."—Cross-examined by Mr. Miley: Were you ever in the Official Assignee's office? Yes.—Were you dismissed? Yes.—Were you ever prosecuted? Yes.—For what? For issuing a cheque without funds to meet it.—What happened in the case? The charge was dismissed.—You took the bottle out of the defendant's shop and kept it for a time? I sealed it and brought it to the brewery.—It was in your exclusive custody. Yes.—Mr. O'Shaughnessy: You gave a list out of the Official Assignee's office to Kemp's or Stubbs—a breach of duty? Yes.—And that was what you were dismissed for? Yes.—Patrick Higgins deposed that he accompanied the last witness to defendant's premises, and afterwards saw him seal and lodge the bottles in Mr. Watson's strong room. They were not opened or interfered with in any way. The bottles were rolled up in paper and taken away.—To Mr. Miley: Witness was in Mr. Sutton's employment. Previously he was a carman.—How often were you arrested? Twice.—For what? Drunkenness.—How long is it since you were a carman? A couple of months.—When you purchased the samples where did you go?—To Mr. Phillips' house, 2, Royal-terrace, Fairview, where the bottles were sealed, and then we drove to the brewery.—Mr. Watson was again examined, and described the methods of analysis pursued by him regarding Guinness's porter.—Mr. Miley objected, and said that in his opinion the method adopted by the witness had as much to do with the case as the Mikado's method of governing Japan.—Witness, continuing his evidence, stated that the bottle produced, and which was labelled double stout, was of the same gravity as porter.—Mr. Miley contended that all this was not evidence.—To Mr. O'Shaughnessy: The contents were not what was referred to—namely, Guinness's extra stout.—Mr. Miley urged that the Act of Parliament did not contemplate the employment of an analyst at all, and that the procedure, in justice to defendants, should be as under the Food and Drugs Act of '75, and by which his client would have been afforded an equal opportunity of having the samples examined and analysed as the prosecutor had in this case.—Mr. O'Shaughnessy contended that a false statement had been made on the

face of the defendant's bottles, and how better could that be proved than by producing the analyst, whose duty it was to examine from day to day the article—that stout manufactured by the prosecuting firm. Who better to analyse it?—Mr. Miley: The public analyst is the answer.—Mr. O'Shaughnessy: What could be more material than the evidence of the analyst to prove that which he was in the best position to prove? Here there was a bottle labelled extra stout, and which contained simply porter. The Guinness firm had prosecuted under this Act in England and Ireland, and it was utterly absurd to suggest that what should be done was to divide up the samples as between prosecutor and defendant.—Mr. Swifte said it had been suggested that the public analyst, Sir Charles Cameron, should be the analyst, but in his opinion Mr. Watson was the more suitable, for it was his daily occupation to examine and analyse this article.—Mr. O'Shaughnessy: Yes; he was sent out every brew for ever so long, and no better evidence could be given. The Messrs. Guinness were determined to put an end to this fraudulent practice.—Mr. Watson, in answer to Mr. Miley, said the samples of stout which were brought to his office every day for analysis came from the vat, and were brought to him by their foreman. He did not see the samples taken. He would swear that every barrel of stout that went out was not less than a specific gravity.—Mr. O'Shaughnessy: What is brought to you is a sample of all?—Yes, a sample of the whole brew.—Mr. James Dodd, the defendant, examined by Mr. Miley, said that he was not a party to selling anything described as stout which was not stout.—Looking at the bottle produced what would you say had been in it?—Guinness's double stout. I was not a party to tampering with its contents.—To Mr. O'Shaughnessy: Witness by the label represented that he was selling double X stout.—If the contents was plain porter would that be a false description?—Yes, and against my instructions.—Have you the man in your employment who bottled this stout?—No; he is dismissed since Monday.—Do you keep a cellar-book?—No; nothing except the invoices.—Is the double X and plain porter in the one cellar?—Yes.—And all the bottling and labelling is done there?—Yes. Witness was staying at Skerries since 1st June, and in his absence his places were managed by his assistants.—If the double X stout is mixed with the plain porter, who gets the profits; don't you?—Yes; but if it was done it was against my instructions.—Do you suggest that this was done by your assistant?—I dismissed him, and he was very negligent.—Then you would not be surprised if he put the double X label on the single stout bottles?—No; nor if he put the single labels on the double.—A discussion arose at three o'clock as to whether the rest of the cases should not be adjourned.—Mr. O'Shaughnessy pressed that the hearing of the summonses should be proceeded with;

they would not take long.—Mr. Harrington remarked that as his offer to convenience Mr. O'Shaughnessy had not been accepted he would not shorten the case one inch, but would address the magistrate at the length which the importance of the case deserved.—Mr. O'Shaughnessy: I am sure you will talk plenty of nonsense.—Mr. Harrington: I won't talk half the nonsense or impertinence that you do.—Mr. Swifte stated that he would not give any decision until he had heard all the cases.

BACTERIOLOGY RUN MAD.

THE Berlin correspondent of *The Standard* telegraphs over this great discovery by a German professor:—

"Professor Marpmann, of Leipsic, has recently examined 67 kinds of ink, such as are used in schools, and has arrived at results which show that it may, under certain circumstances, be dangerous to wound oneself with an inky pen. Most of the inks he examined were made of gall-nuts, and contained a large quantity of micrococci bacteria and fungi. One sample, made of nigrosine, an aniline pigment, and taken from a newly-opened bottle, also contained quantities of fungi and bacilli. From a red and a blue sample the Professor cultivated a bacillus which killed a mouse in four days; but they were taken from bottles which had been open for three months."

Is there any known substance, we wonder (says the *Westminster Gazette*), in which a German professor could not cultivate a bacillus which would kill a mouse in four days? It seems to us rather creditable to the mouse to have lived four days. The moral is, don't drink ink, or wipe your pen on your lips. The temptation to do these things is so besetting that these cautions ought to be widely disseminated. By dint of great determination we have ourselves resisted the impulse to take a draught of ink in the early morning.

HANTS COUNTY COUNCIL AND ANALYSES.

ON the report of the General Purposes Committee being presented by Colonel Grimston, Mr. Harris suggested that the general public should be given facilities in the matter of having drinking water analysed as was given to agriculturists in respect of the analysis of soils, viz., that the county would pay a part of the charge of the analyst, the person submitting the sample being responsible for the remainder.—Mr. Jeffreys, M.P., considered this to be a very reasonable proposition, pointing out that it would not be necessary to have a complete chemical analysis in the case of water, as a certificate saying whether the sample was or was not good drinking water would be enough for most people.—Mr. Simmons remarked that only twenty-one samples of new milk had been taken by the inspectors under the

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"KURRUWA" DELICIOUS, SOLUBLE COCOA.

Manufactured in England on the popular Dutch principle.

ANALYTICAL REPORTS.

"The Laboratory, Bow and Bromley Institute, London, E."

"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average."

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S., Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London; Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8.

This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

"KURRUWA" CHOCOLATE ALMONDS.

"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*."

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

Please ask your GROCER or CONFECTIONER for these specialities, see that they are marked "KURRUWA," and, if you cannot obtain them, write direct to THE "KURRUWA" ASSOCIATION, 2 and 3, IDOL LANE, LONDON, E.C

Food and Drugs Act for analysis during the past quarter, and he considered that in a county like Hants the number should be much greater.—Dr. Brown remarked that in the district of St. Mary Extra there were many itinerant vendors of milk, and he had heard unofficial complaints of the quality of the milk they sold. The duties of the inspectors should be efficiently discharged, especially in the interest of the poorer classes of the community.—Colonel Grimston said the committee would take the matter mentioned by Mr. Harris into consideration, but they believed in leaving the responsibility in regard to drinking water on the local authorities in whose province it lay. As to the milk, the committee would be pleased to give more stringent instructions to the inspectors.

ACTION AGAINST A RESTAURANT COMPANY FOR SELLING MEAT UNFIT FOR FOOD.

At the Newcastle County Court, on August 13, His Honour Judge Greenwell gave judgment in the action, heard on Wednesday, in which Mr. Gawen Gough, of Haswell, claimed £15 damages from the Collingwood Restaurant Company for breach of warranty in supplying certain cooked meat—a plate of pork—to him on March 24 last. Plaintiff had the roast pork for lunch, and he said that at four the next morning he was seized with violent pains in the stomach and bowels accompanied by diarrhoea and sickness. He was off work for four weeks owing to his illness.

His Honour said the first question was one of fact. Was the meat unfit for food? As there was no evidence to the contrary, it seemed to him an irresistible inference that the pork was not fit for food, and that it caused the plaintiff's illness. That being so, the question arose: was there on the sale a warranty, or rather a condition, that the meat should be fit for food? He had examined the cases bearing on the matter. Lord Esher, in giving judgment in one said: "It seems to us, either assumed or expressly stated, that the undertaking is that the article should answer the description given of it in the contract. . . . The governing principle, therefore, is that the thing offered and delivered shall answer the description of it given in the contract, or which would be so given if the contract were accurately drawn out." If the Sale of Goods Act had not been passed it seemed to him, on the judgment in the case in question, there could have been no possible question that in this case judgment must have been for the plaintiff, because the goods were sold for the purpose of being eaten, and it was a condition, not a warranty, in the sale in such circumstances, that the meat should be fit for eating, which this meat was not. Had the Sale of Goods Act made any difference? Mr. Meynell argued that in this case there was nothing to answer the paragraph in the section that the buyer made known to the seller the particular purpose for which the goods were bought, so as to show that he relied upon the skill and judgment of the seller. It seemed to him that if this case was not such a case there was no case in which it could be done. A customer went to get his dinner, and ordered from the bill of fare, without asking to see the joint or making inquiry, a plate of meat, which he ate. Surely this justified the inference that he relied upon the skill and judgment of the vendor to supply him with wholesome victuals, and unfortunately in this case, not through any fault of the vendor, and probably through no fault of the butcher who sold it, the meat was not wholesome. But that, as Lord Esher said, made no difference at all if the article delivered did not in fact answer the description of it in the contract, and that in this case was that it was wholesome food. It seemed to him that the judgment must be for the plaintiff. The damages claimed, he thought, were exaggerated. Judgment would be for £11 and costs.

On the application of Mr. Meynell, who appeared for the defence, leave to appeal was given. Mr. Meynell intimated that there were many other cases dependent on this, representing, probably, some hundreds of pounds.

MAGISTRATES AND THE "NOTICE OF DILUTION" GAME.

At the Petty Sessions, Steyning, before H. T. West, Esq. (in the chair) and other magistrates, an adjourned application was made for the transfer of the license of the Royal Sovereign, New Shoreham, from Richard Weller, the present license-holder, to George Ladds. The application had been adjourned from the last court for the production of testimonials by the applicant, and the testimonials were now handed in.—The Chairman (to Mr. G. A. Flowers, clerk): How many times has this house been transferred? Is it a fully-licensed house?—The Clerk: It is a fully-licensed house. It was transferred once in 1881, twice in 1886, once in 1888, and once in 1889, once in 1893, once in 1896, and again this year.—The Chairman: Superintendent, is this a house in which a notice which has been brought before us has been shown?—Superintendent Hooker: Yes, sir.—The Chairman then said: The Bench are going to allow the transfer of this licence until the Brewster Sessions, but the house has been transferred so often that the question has arisen in the minds of the Bench whether the license is necessary for public convenience, and at Brewster Sessions, before any renewal of the license is granted that question will be considered.—The Bench will be glad of any evidence which may be available to enable them to make up their minds on that point. With regard to the question which I asked the Superintendent just now, it refers to a notice which has been put up in several houses in the district to the effect that the person holding the license does not supply pure spirits—that is to say it is to the effect that all spirits supplied in that particular house in which the notice is put up are diluted. Now the Bench are taking very strongly into consideration whether premises on which a notice to that effect is put up is really one which ought to have a license. The license is given not only to enable the person to carry on trade, but also for the convenience of the public, that they may have a certain class of goods supplied them, and if the holder of the license puts up a notice to the effect that he does not supply that which he is licensed to supply them, it becomes a great question whether the license for that particular house is necessary for the public good. The Bench are taking that matter very seriously into consideration—whether they will renew at Brewster Sessions licenses of premises where that notice has been put up.

SPIRITS.

WILLIAM WHITTINGTON, landlord of the Carpenters' Arms, Boughton, was fined £2 including costs by the Retford bench of magistrates, on August 14, for selling whiskey below the strength required by the Act.—Inspector Garforth, of Retford, proved the case.

At Douglas, on August 21, John Edwin Glover, of the Lancashire Hotel, was summoned for selling whiskey below the legal standard.—Inspector Cain said he went to the defendant's house and asked for a pint of Scotch whiskey out of a jar he saw marked. When analysed, it was found to be 17.10 degrees below the standard.—The defendant said he told the inspector that that was not the whiskey he sold as a rule, but this was denied. He also said that the analyst's certificate was incorrect, the whiskey being only two-tenths of a degree out.—Counsel for the defence pointed out that the charge was for selling whiskey "not of the nature,

quality, and substance demanded," and this, he alleged, was not true, because on the inspector's own admission he was given the spirits he asked for.—The Stipendiary upheld the objection, and dismissed the case without costs.

BEER.

At Lambeth, on August 23, Benjn. C. Lines, of the Fountain Public House, Lambeth Walk, was summoned by the Excise for diluting beer.—Mr. E. N. Alpe appeared in support of the summons, and the defendant was represented by Mr. J. B. Matthews.—After hearing the evidence, Mr. Hopkins ordered the defendant to pay a penalty of £10 and £2 6s. costs.—John Harris, of the Britannia Beerhouse, Railton-road, Brixton, was also summoned by the Excise for diluting beer, and was ordered to pay a penalty of £5 and £2 6s. costs.

The advocates of "pure beer" are making exhaustive experiments with the various materials now used in the manufacture of beer. These will take some little time, and until they have been completed the committee appointed by the Chancellor of the Exchequer to report on materials used by brewers will not meet. The way malt has been displaced by maize, saccharum, and other substances may be judged from the admission of a brewer, who, writing to a trade paper a week ago asking for advice, says that to 16 cwt. of malt he uses 3 cwt. of maize and 8 cwt. of saccharum, or eleven twenty-sevenths of adjuncts. In 1879, the year before the malt duty was repealed, the proportion was one fifty-fourth.

MARGARINE.

At North London, John Lacey, a shopkeeper, of 149, Morning-lane, was summoned by the Hackney Vestry for selling as butter an article found on analysis to contain 75 per cent. of foreign fat. Mr. H. T. Tiddeman prosecuted, and Mr. Windsor (Young and Windsor) defended. The offence was admitted; but it was denied that there was any intent to defraud, or guilty knowledge whatever. The fact was the defendant had bought the article as butter, and paid for it as such; and if anyone was to blame it was the wholesale dealer. Mr. Tiddeman said he had no reason to doubt the invoice that had been put in; but Mr. Cluer replied: That defendant is fined 40s. and 12s. 6d. costs, and he may recover it from the wholesale man.

A MARGARINE WARRANTY.

At Manchester, on August 18, John Powell, grocer, Oldham-road, was charged under the Food and Drugs Act with having sold as butter a substance afterwards found to be composed of 20 per cent. of butter fat and 80 per cent. of foreign fat. Mr. Hockin, on behalf of the defendant, announced that he relied upon a written warranty given by wholesale dealers named Cohen. Mr. Rooke, who prosecuted on behalf of the Corporation, then called evidence to prove the purchase of a pound of "pure butter," afterwards found to be margarine. Mr. Hockin stated that the particular purchase was what was known as Dutch produce. That was recognised as being pure butter in the trade, and defendant purchased four kegs of it for £6 16s. It was part of this butter that was purchased by the Inspector. Evidence having been given by two shop assistants, Mr. Headlam dismissed the case, refusing to adjourn it in order that Messrs. Cohen might be summoned. Mr. Wilkinson, barrister, who watched the case on behalf of Messrs. Cohen, said he did not wish the statement that the "butter" in question was supplied by Messrs. Cohen to go uncontradicted. They denied that the "butter" was theirs. Mr. Hockin replied that the defendant had refused to pay for the "butter," and civil proceedings were pending.

THE WARRANTY AGAIN.

At Southwark, on August 20, the Sudbury Dairy Company were summoned by Mr. A. Grist, inspector to the St. Saviour's District Board of Works, for selling at their branch establishment in Blackfriars-road milk containing 10 per cent. of added water.—Mr. Ricketts, for the defence, said the milk was purchased from the Wilts and Hants Dairy Company, who gave a printed warranty with every churn of milk. According to section 25 of the Sale of Food and Drugs Act, the defendants were not liable when they possessed a warranty.—After hearing the evidence, Mr. Fenwick said he was satisfied that the defendants were not responsible. The summons would therefore be dismissed.

MILK.

At the Leeds City Police-court, on August 13, Albert Walker, farmer and milk dealer, of Church Farm, Shadwell, near Leeds, pleaded guilty to a summons for selling milk which was adulterated with water. Mr. C. C. Jolliffe, Deputy Town Clerk, prosecuted, and stated that the milk was being delivered at the shop of a retail dealer when Inspector Walker bought a sample, which was afterwards certified by the City analyst to contain 27 per cent. of added water. Mr. Jolliffe asked for a severe penalty, and added that defendant was fined £5 in 1892 for a similar offence. On that occasion it was stated that there was 18 per cent. of added water. A fine of £5, including costs, or in default one month's imprisonment was inflicted.

CHAMPAGNE MILK.

M. CARSINS has patented in France a process of sterilising milk, beer, and other fermentable liquids by sending a current of oxygen gas through them in a closed vase. *The Globe* states that he also prepares a new beverage which he calls "champagne milk." Skim milk is sweetened with syrup and flavoured, then put into a closed vessel, where it is sterilised by oxygen gas, then "champagneised" by introducing carbonic acid gas. The drink is said to be refreshing, nourishing, tasty, and hygienic, and will keep for an indefinite time. Certainly a beverage of this sort is a desideratum. The ordinary temperance drinks, lemonade and its congeners, milk and soda water, etc., leave something to be desired on the score of nourishment.

SIR JOHN BRIDGE ON ANALYSTS' REPORTS.

At Bow-street, on August 18, Daniel McCarthy, of 29, Newton-street, appeared before Sir John Bridge to a summons charging him with selling milk from which at least 24 per cent. of fat had been abstracted. Mr. H. C. Jones supported the summons on behalf of the St. Giles's Board of Works.

Inspector Bond gave evidence as to having bought a sample of milk from the defendant, who when told what it was required for, said, "I don't know how it is," apparently meaning that he did not know what condition the milk was in.

Mr. Jones pointed out that most of the defendant's customers were very poor persons, and it was important that when they bought milk they should be supplied with the pure article. The report of the analyst showed that the milk sold to the inspector by the defendant had been skimmed, no less than 24 per cent. of the fat having been removed.

Defendant said he was in a very small way of business. He only sold about five quarts of milk a day. He purchased it at twopence-halfpenny a quart, and sold it at threepence. The people who sold it to him had twenty or thirty customers, and sometimes he

was served after most of the cream had been taken from the top.

Sir John Bridge said defendant appeared to have had a very small quantity of milk. It had been standing for some time when the sample was taken, and it was possible that at that time most of the cream, which naturally rose to the top, had been sold to other customers. It was very easy for persons to suppose that fat had been extracted from milk, when nothing of the kind had taken place. The absence of the full amount of fat which analysts always looked for, might be attributable to the weather, bad pasturage, or the condition of the cow supplying the milk. This summons would therefore be dismissed.

Mr. Jones asked Sir John Bridge to reconsider his decision, as, if it were allowed to stand, it would paralyse the local authorities who were anxious to prevent the sale of impure or diluted milk. He pointed out that the analyst certified that 24 per cent. of fat had been abstracted, and no evidence had been called to rebut the charge.

Sir J. Bridge: It simply means that because the analyst does not find as much fat as he expected he comes to the conclusion that some has been abstracted.

Mr. Jones: But the analyst goes by certain principles.

Sir J. Bridge: I am not satisfied that any fat was abstracted.

Mr. Jones pointed out that in the case of Payne and Boughtwood it was there ruled that when a man sold milk which was deficient in fat, owing to the cream having risen to the surface, and sold beforehand, he ought to be convicted, notwithstanding the absence of intent to defraud. Mr. Jones proceeded to quote the case of Harrison and Richards, where it was ruled that in the absence of rebutting evidence a magistrate had no right to set up his own opinion as to the quality of milk against that expressed by the analyst in his certificate.

Sir J. Bridge: I see that Mr. Lushington, my colleague, was connected with that case. I would rather be wrong with Mr. Lushington than right with anyone else.

Eventually, on the suggestion of the magistrate, the case was withdrawn, instead of being dismissed.

ISLINGTON AND ADULTERATION.

DR. F. L. TEED, public analyst for Islington, in his annual report, issued recently, states that he has examined 825 samples of drugs and food, of which 127 proved to be adulterated. Of the samples submitted for analysis, 468 were samples of milk, and fifty of these were found to be adulterated—unduly watered down; 174 samples were bought on Sundays, and Dr. Teed remarked that "adulteration of milk on Sundays was practised to more than twice the extent to that which prevailed during the remainder of the week." Of sixteen samples of whiskey analysed, only two were adulterated. Of 149 samples of

SO-CALLED "BUTTER,"

twenty turned out to be margarine. Fourteen samples of "Demerara" proved not to be cane, but beet sugar, and, until these samples were taken, the analyst says, "no one had any conception that the sale of beet sugar for cane sugar had assumed anything like the proportion that the analysis revealed." In their report, the Food Products Committee of the House of Commons declared that it was

"A FRAUD" TO SELL BEET SUGAR

for Demerara, and hence the fourteen samples were procured. Magistrates now held throughout the country that the purchaser must be given the article for which

he asked, and not that which the grocer thought would suit him best. On the whole, Dr. Teed considers that, compared with other places, the amount of adulteration practised in Islington is small.

ADULTERATION IN HERTFORDSHIRE.

MR. A. E. EKINS, the analyst appointed for the County of Hertford, reports:—

"During the quarter ended June 30, 1897, thirty-seven samples of food were submitted to me by your inspectors, as follows: 19 samples of milk, 10 of butter, 6 of whiskey, 1 of gin, 1 of coffee. Of these, 2 samples of milk, 1 of butter, and 2 of whiskey were adulterated. One sample of whiskey and one of gin were very weak, being slightly below the standard, and in these cases the vendors were cautioned. Legal proceedings have been instituted in each case of adulteration, and fines have been inflicted. After my remarks in previous report I am pleased to notice the improvement as regards adulteration in butter. This quarter the percentage is only 10, as compared with 20 in last quarter."

CAMPHOR LINIMENT.

AT the instigation of the Health Committee of the Birmingham City Council, on August 10, George Day Horton, chemist and druggist, of Birmingham, was summoned for selling adulterated camphor liniment.—The prosecution was conducted by Mr. Hiley (Assistant Town Clerk), and Mr. Porter defended.—Evidence of the purchase of some liniment from defendant's shop having been given, Dr. Alfred Hill, the City analyst, said that he had analysed the liniment and found it contained ten parts of camphor to ninety of olive oil, or practically 50 per cent. less of camphor than was required. A second sample of the liniment that he analysed he found to be all right. The liniment was used for a variety of complaints, such as rheumatism, bronchitis, congestion, and colds, and the camphor being the more important agent, the result would be that the liniment would only be half as good as it should be.—Mr. Porter: You do not complain of the quality of the camphor?—Dr. Hill: Oh, no, only the quantity.—For the defence Mr. Porter said that he had a good explanation to offer. The fact was the two-pound bottle in which defendant kept the liniment was accidentally broken, and a four-pound bottle was supplied in its place. The assistant who made up the fresh stock of liniment only used half-a-pound of camphor—the quantity for a two-pound bottle—instead of one pound, and that was how the mistake had arisen.—The Chairman of the Bench said they were quite willing to believe the affair was a case of inadvertence, and that there was no intention to defraud the purchasers. At the same time the purchaser did not get what he was entitled to. He pointed out that the maximum penalty was £20, but under the circumstances a penalty of 20s. and costs only would be imposed.

ADULTERATED CHOCOLATE CIGARETTES.

AT Nottingham, on August 21, Emily Bircham, shop-keeper, Netherfield, was summoned for selling adulterated chocolate cigarettes.—An Excise Officer stated that he visited the defendant's shop and purchased twopennyworth of chocolate cigarettes, divided them into three parts, and had sent one to the public analyst, whose certificate of analysis he now submitted, showing that they were adulterated.—Defendant said that she purchased the cigarettes from a traveller, who told her that they were chocolate. She had no guarantee.—Defendant was fined 10s. 6d.

HERB BEER.

At the Rochdale Police-court, on August 18, James Shaw, shopkeeper, 279, Manchester-road; John Goffe, Stanley-street; and Mary Hinley, of Toad-lane, were charged with selling on June 19, non-intoxicating drinks containing over 2 per cent. of alcohol, contrary to 48 and 49 Vic., c. 51, sec. 4. Mr. R. D. Maddock, of Heywood, appeared for the defendants and for Messrs. W. Noble and Co., the manufacturers of herb drink.—Mr. A. E. Sheppard, supervisor, who conducted the prosecution, called Mr. James Robins, the analyst, who stated that drink sold by James Shaw and Mary Hinley, which went by the name of burdock and dandelion beer, contained $4\frac{1}{2}$ per cent. of proof spirits in it, which was $2\frac{1}{2}$ per cent. more than was allowed by the Act of Parliament. The winter or dandelion stout sold by Goffe contained $4\frac{2}{10}$ per cent. of alcohol in it. — Cross-examined by Mr. Maddock: The dandelion beer was made from sugar, barm, and herbs, and the winter stout from the same ingredients, and liquorice was added. If these drinks were kept in the bottles, especially in hot weather, then the alcoholic strength increased. No spirit was put into it at the time it was made. In reply to Mr. Hartley, the magistrates' clerk, Mr. Sheppard said that the beer sold by publicans in Rochdale contained from 4 to $8\frac{1}{2}$ per cent. of alcohol, bottle beer from 10 to 11 per cent., and old bottled ale from 13 to 14 per cent.—Mr. Maddock said he would admit that the three defendants had been selling the liquor above the strength, but they had committed the offence unknowingly. Messrs. Noble and Co., Heywood, were the manufacturers of it, and it had increased in strength through being kept in the bottles too long. The essence of the winter stout had been sold to Messrs. Noble as non-intoxicating liquor, and now they were giving up purchasing it.—Mr. Sheppard, addressing the magistrates, said he would have preferred, and it would have been more satisfactory, if he could have summoned the manufacturers of this liquor instead of the defendants, but the manufacturers knew that they were not liable, and shielded themselves behind the retailers of it. A fine of 10s. 6d. and costs was imposed in each case.

YORKSHIRE RELISH.

MR. JUSTICE BYRNE, in the Chancery Division, on August 19, heard the case of *Powell v. Flather*, in the form of a motion by the proprietor of the firm known as Goodall, Backhouse and Co., of Leeds, the manufacturers of "Yorkshire Relish," to restrain the defendant from representing that he is in possession of the secret of the recipe of the plaintiffs, and from selling or advertising for sale any recipe purporting to be the recipe for "Yorkshire Relish." The defendant, who is of Chorlton-cum-Medlock, according to the plaintiff's case, advertises for sale, and sells at eighteenpence apiece, a recipe which he professes to be the secret of the plaintiffs, but upon examination it has been found that it is not, the plaintiff's recipe being known only to them. It was the false representation of the defendant the plaintiffs sought to restrain, and Mr. Justice Byrne granted the order asked for with costs.

COPPER IN PEAS.

MESSRS. VYE AND SON and Mr. Albert Albourne, grocers, carrying on business at Broadstairs, were summoned at Margate for selling preserved peas adulterated with sulphate of copper. For the defence it was contended that there must be something to preserve the peas, and as the purchaser knew that, the charge of adulteration could not be upheld. The cases were adjourned for the attendance of the public analyst.

THE BRUSSELS CONFERENCE AND A SANITARY INSPECTOR'S EXPENSES.

At the monthly meeting of the Hexham Rural District Council a recommendation from the Sanitary Committee was read to the effect that Mr. W. Waugh, sanitary inspector, should be appointed to attend the Conference to be held at Brussels on the 6th prox., in the British section of hygiene, and that his expenses, which would probably not exceed £5, be paid.—Mr. H. Straker said he for one would take serious objection to such a journey being taken, as the expense would not stop at £5.—Mr. William Trotter asked whether the discussions would be carried on in English, or what language? If not carried on in English, what opinion could Mr. Waugh form of them? They might be translated into English in the reports sent out afterwards, and Mr. Waugh might gain more from reading the reports than in listening to a language he knew nothing about. ("Oh, oh," and laughter.) If the gentleman calling out "Oh, oh" would reply to him he was ready to take up the argument.—After further debate it was decided not to send Mr. Waugh to the Brussels Conference.

REFUSE DISPOSAL.

NEWINGTON (London) disposes of its refuse by a method formulated and worked out by Mr. L. Dunham, the clerk to the vestry. The vestry have established three depôts in Kent, Meopham, Longfield, and Sevenoaks, and one at Walworth, in connection with the scheme. All the street and house refuse is first carted to the town depôt and then shot into railway trucks and taken to the country depôts. The sweepings from the roads are taken to Meopham and placed in large concrete bays where they eventually evolve into good manure, which is sold to the neighbouring farmers as Newington Mixture. House refuse chiefly goes to Longfield, whilst old mattresses and similar rubbish are burnt in a destructor. Milk tins, of which there is a surprisingly large number, together with lobster tins, &c., are placed in heaps where they gradually rot away. Ashes are sifted by women and men, and that which passes through the sieves is sold to brickmakers. At Sevenoaks the vestry are disposing of the rubbish by filling up a pond.

CORRESPONDENCE.

THE HIGH BIRMINGHAM DEATH RATE.

To the Editor of FOOD AND SANITATION.

SIR,—The fact that the death rate in Birmingham for the last week reached "the extraordinary height of 43.00 in the 1,000 is attributable largely to the absence of proper drainage and ventilation in the houses; but in my opinion a great number of Birmingham factories, as regards drainage and ventilation, are in a shocking condition. Two w.c.'s to fifty and even up to a hundred male and female workers is common enough. In some cases the pipes run under the floor, and were laid before concrete beds were a necessity. The closets on the ground-floor of four-story factories have often the air-shaft a few feet above their roofs, just high enough for the germs to be blown into the first-floor windows. In one of the worst cases I know of sulphur is burnt in large quantities in close proximity to the w.c.'s, and to this physical condition, unfavourable to the existence of germs, the proprietor owes the fact that not many are kept away by illness.

R. S. OLDACRE.

Temple-street, Birmingham, Aug. 19.

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of the United Kingdom.**

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Food and Sanitation.

SATURDAY, SEPTEMBER 4TH, 1897.

PUBLICANS AND THE WATER AT SPIRIT PRICE SWINDLE.

THE law declares that gin has a standard of 35 u.p., and that rum, whiskey, and brandy shall be 25 u.p., but by the exhibition of a notice stating that "all spirits sold here are diluted," publicans and hotel-keepers running what are regarded as high-class businesses are swindling their customers wholesale, the liquor sold over the counter being at times 50 or 60 u.p. When we add to this that there is no prohibition against the distiller using any trash he pleases, be it potato,

Indian corn, damaged fruit, etc., the state of the liquor trade can only be adequately described by the word "rotten."

This is demoralising, and a cruel injustice to the distillers and traders who prepare and sell only high-class genuine spirits. As to its effect upon the public the result of our inquiries show that the pernicious effects of alcohol arise not so much from over-indulgence as from the maddening rubbish commonly sold. It is not enough to put forward against this as an argument that the Inland Revenue chemists approve of the use of substitutes in place of malt, for we long ago exposed their scientific incompetence and showed how ruinous their advice has been to British industries, to public honesty, and to the public health and pocket.

The Worthing Licensing Bench have resolved upon a course which we hope will be followed by all other licensing authorities.

Addressing the license-holders who were present, the Chairman (Colonel Wisden) said he wished to make a few remarks about the renewals, and perhaps it might take some of them by surprise. He had in his hand a list of thirty-two licensed houses in the division where diluted spirits were sold for two purposes—first, to defraud the public, and, secondly, to evade one of the best Acts of Parliament ever passed—namely, the Food and Drugs Act. The Bench had gone into this question, perhaps, not so thoroughly as they would do, but, still, sufficiently far to say that none of the licenses relating to houses where diluted spirits were sold would be renewed that day, but would be adjourned for a month, and in the meantime the Bench would seriously consider what course they would take.

The total number of licenses issued in the division, inclusive of grocers' and other off-licenses, is eighty-five, so that about one-third have been withheld.

This spirited and necessary action would, if generally followed, suppress one very mean and indefensible fraud, but, to secure pure spirits being sold generally, we want legislation to punish those distillers who palm off potato spirit, &c., as old Scotch or Irish whiskey. That, and a Pure Beer Bill, would do much to suppress drunkenness and crime.

The Steyning magistrates have also pronounced an opinion on the "dilution" swindle similar to that of the Worthing bench, so that slowly but surely one more of the swindles we have exposed is being squelched. To show how widespread it is we quote the following cases of excess water sold at spirit rates within the past few days:—

At Neath, on August 29, John Phillips, landlord of the Royal Oak public-house, Tonna, was fined 7/1 and costs for selling whiskey 44½ degrees under proof—i.e., nineteen and a-half per cent. of water sold at the price of whiskey.

Some of the pleas for the defence of this practice would shame Tartuffe or Pecksniff. For instance:—

Albert James Muir, lately landlord of the George and Dragon Inn, Farnborough, and Joseph Tinson, landlord of the Beech Tree, Orpington, answered, on August 30, at Bromley (Kent), to summonses charging them with selling whiskey reduced below the legal limit.

Mr. Gregory, solicitor, who appeared for both defendants, pleaded guilty, and among other defences set up, urged that the spirits were so diluted—in one case 5·71 degrees below the legal 25 per cent. limit, and in the second to 7·2 degrees—because they were intended for the ill-fed hop and fruit pickers, whose stomachs and nerves could not stand anything stronger than ale, or, at most, very weak spirit.

Both defendants were fined 20s. and costs each.

Because some human beings are unfortunate enough to be hop-pickers, kind publicans, zealous for the preservation of the poor wretches' health, put extra doses of water in the spirit, but we do not hear that

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BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House and
successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK!

they make a commensurate reduction in the charge for the stuff. Such is the state of the trade, and, as we have said, only the word "rotten" can describe it. There is every reason, therefore, why the admirable example of Worthing and Steyning should be followed.

THE ADULTERATION OF SILK.

Two papers read before the Society of Chemical Industry in Manchester, and before the Chamber of Commerce, Macclesfield, give some remarkable details on the adulteration of silk by chemical weighting. Sir Thomas Wardle states that the silkworm is the first sinner in the idea of weighting silk—that is to say the silkworm was the first to reveal the fact of a possible attachment of a substance to the fibre foreign to the nature and properties of the fibre itself. It was found that by immersing the silk, whether boiled-off or in the gum, in vegetable extracts containing tannic acid, an affinity of one towards the other was set up; a chemical union took place between the warp and the tannic acid, bringing up the silk to nearly its original weight before it was boiled-off, or replacing nearly the 25 per cent. of gum it had lost in that process.

It has been left to the French, Germans, and Swiss to carry to perfection the fraudulent art of selling mineral matter for silk. On this point Mr. Carter Bell says:—"The heaviest weighted silk I have as yet examined is where 100lb. weight of silk were sent to the dyer with a request that it should be made into 1,000lb. This particular silk gave 43 per cent. of ash, there was 9 per cent. of moisture, and the amount of nitrogen was under 2 per cent. This would give less than 10 per cent. of silk in the sample. The only advantage in such a compound (for it is a misnomer to call it silk) is to make an incombustible dress for a lady, for it would be an impossibility for her to be burnt to death in such a dress. When such a compound is raised to a high temperature it does not flare up, but simply smoulders away, and leaves the original form intact, and in many cases with a beautiful silky lustre. One of the metals which is largely used for weighting silks is tin."

INOCULATED RABBITS.

THE theft of inoculated rabbits from a Paris laboratory is not pleasant reading for housekeepers; for there is no proof that the temperature necessary for rabbit-roasting will destroy disease germs (says the *Daily Graphic*). A lady recently returned from Grahamstown tells an amusing story of laboratory rabbits. She was discussing the limitations of South African larders with

a young doctor attached to the medical school at Grahamstown. "We are so tired of beef one day and mutton the next; and both are inferior."

"Oh," said he, "I can vary your commissariat. We often have consignments of rabbits for laboratory purposes. I'll send you a couple of the next lot that comes in."

A few days later two plump bunnies arrived, were joyfully welcomed, and duly served at dinner. "We had so looked forward to these rabbits," said the good housewife, "and were keenly disappointed to find them almost uneatable. We all had a taste, for novelty's sake, and banished the remainder to the kitchen. We noticed that Dr. — began to call frequently, and on each occasion inquired, somewhat anxiously, if we were quite well. Two months later he confessed, with humility, that owing to some mistake the rabbits that reached us had been inoculated for anthrax. We all escaped. But rabbit will never again appear on our table. The associations are too horrible."

When laboratory friends are generous, and bunny-burglars active, it would be well to look gift rabbits in the mouth in a strictly physiological sense.

PROFESSOR MAERCKER ON THE USELESSNESS OF SOIL ANALYSES.

THAT soil analysis is an insufficient guide to manuring we have held for a long time, says the *Fruiterer and Groengrocer*, in spite of the claims of a certain section of young chemists to tell what a soil needs in this direction by an analysis of it. Prof. Maercker, in a masterly address to the German Chemical Society, has utterly demolished the arguments, or, rather, claims, of the young chemists, for he maintains "that the chemical analysis of a soil is of little use as a guide." The Professor, however, tells us how scientists may work out the wants and the needs of the soil desired. By his method plants are allowed to grow in the soil under examination. Great care is taken to furnish ample supplies of all plant food-stuffs, with the exception of the one whose presence in available form is being tested. The plants are then submitted to analysis, and this analysis is compared with that of the same plants which have been grown on soils furnished with all the needful plant food-stuffs; on this is based the system of rotation of crops, where the second crop is so chosen that it chiefly takes the ingredients of the soil which have been left by the preceding crop. The effect of this system enables us to utilise sandy, light soils which have hitherto been looked upon as being too poor for cultivation, since by the medium of intelligent manuring they may readily be made to yield crops as good as those obtained from the most fertile soils in the United Kingdom. It is time that the agricultural chemist justified his existence.

HOTEL KEEPING IN KLONDYKE.

THE following notice is posted in the leading hostelry at Klondyke:

"Board must be paid in advance; with beans \$25, without beans \$12. Salt free, no extras allowed, potatoes for dinner, pocketing at meals strictly forbidden. Gentlemen are expected to wash out of doors, and find their own water. No charges for ice, towels, bags at the end of the house. Extra charge for seats round the stove. Lodgers must find their own straw; beds on the bar-room floor reserved for regular customers. Persons sleeping in the barn are requested not to take their boots off. Lodgers must arise at 5 A.M.; in the barn, at 6 A.M. No fighting at table. Anyone violating the above rules will be shot."

MINOR SHELL-FISH.

THE pleadings in the action brought by the municipality of Colchester to assert a right to certain oyster-beds on the foreshore showed that some form of protection had been accorded to Essex oysters since the days of St. Osyth. But, valuable as the oyster is, there are several kinds of English shell-fish, less excellent, but much esteemed both in this country and abroad by those who know their merits, which deserve a greater degree of attention and protection from waste than is now accorded to them. Writing twenty-five years ago, Mr. James Bertram, the author of one of the most interesting and practical handbooks on marine fisheries ever published, drew attention, says the *Spectator*, to the importance of these minor fisheries, and the need of protection for the shell-fish, not only as a form of food, but as the bait which captures tens of thousands of tons of deep-sea fish in the line fishery. Yet at the present date the mussel is, we believe, the only species which is either protected by law, or "cultivated," even in the rudest manner, by the long-shore fishermen of this country. The minor shell-fish which take rank among the marketable commodities of our coasts are the scallop, or "queen," the mussel, the cockle, the razor-fish, and at a distance marked off by the rigorous social distinctions which attach to certain kinds of food, the peri-winkle and the whelk. Clams are not known in this country; and the joys of an American "clam-bake," when a dozen families combine for an outing to catch clams, and then bake them in a big sand pie with potatoes and "soft corn," and eat the three ingredients "all hot," with the flavour of clam diffused impartially, are denied to us; but much the same result can be obtained by forming a party to dig cockles, and bake them in their shells on hot stones upon the beach.

Scallops are so attractive in appearance that they have for some years been commonly sold in the best London fish-shops. They are far the largest edible English shell-fish—among which the crustaceans, such as lobsters, crabs, and sea-crayfish, are not properly classed—but good as they are, they are by no means the best. The mussel, so much esteemed in France, and so neglected in this country by the very classes who are usually keenly on the look out for new forms of fish or fowl to vary the daily bill-of-fare, deserves the second, if not the first, place. Cockles, of which we have a word to say later, are naturally "inferior animals" when compared with the mussel. The cockle cannot be improved. We must take him or leave him for what he is worth. But the mussel, like the oyster, can be taken when no larger than flax-seed, transplanted, fattened, stored, and improved. It is almost capable of domestication, and improves in shape, flavour, and quality under human care more quickly than Vigil's beans, bees, or olives under the *vis humana*, which he, like every other good husbandman, deemed so essential to success. It is very seldom that any one on our coasts takes the trouble to improve mussels. They are just scraped off the beds in shallow water, or from the piles and posts of jetties, and used as bait for fishing. As they are required in almost countless numbers for this purpose alone—nearly five million mussels were used yearly by one fishing village in Scotland in baiting their cod and haddock lines—some effort has now been made to regulate the "take" upon the beds. A license, proportionate in cost to the size of the boats engaged, has to be taken out by fishermen taking mussels from the "scalps" off parts of Lincolnshire and Norfolk coasts, and the smallest mussels have to be returned to the bed. But mussel-farming for profit is very rarely seen, though there is a steady demand for fattened mussels in London, mainly on the part of the French and the well-to-do Italian population, who attach great importance to *la moule* as an indispensable luxury of diet. In the few places where the industry is carried on, though with little regard to economy of labour, it is

so profitable, that one wonders why it has not extended elsewhere. The fish are collected in the first instance by small smacks, the crews of which sail to the mussel-beds or "scalps," and rake up the immature fish at low tide from the shingles to which they are attached. They are then sold to the owners of the "mussel lays," or fattening-grounds, where in the course of twelve months the fish grow so fast that each bushel of mussels laid down fills three bushels when they are taken up to be sold. The culture is most primitive. The young mussels are simply laid down on the mud of a tidal creek, with sufficient shingle scattered among them for the shells to attach themselves to so as to prevent them being washed away by the tide. Soon the whole "lay" becomes a matted bed of mussels. These suck in the "sea-soup" which passes over them at every tide, and wax fat exceedingly. The profits made may be judged from the rent paid for the privilege of laying the fish on one of the fattening-beds. The course of this creek is sixty yards wide. This is divided into transverse strips, twenty-two yards wide, and each of these is leased for £3 a year! One particularly "fattening" corner, where two creeks join, is let for £6 a year. Yet this method of mussel culture, the profits of which admit of such high rentals, is opposed to the practice of the French *boucholiers*, who have brought their system to such perfection that the foreshore of one village, Esnandes, near La Rochelle, produced in 1873, when it was visited by Mr. Bertram, a sum of £50,000 per annum, an amount which, it is stated, has now increased to £70,000. The mussel culture of Esnandes was invented by a shipwrecked Irishman named Walton, who set up fowling-nets on the mud, and devised a "mud-boat" to reach them. He observed that the posts on which his nets were set were covered, first with mussel-spat and then with young mussels. These, being always covered with water, and raised high above the mud, had a far finer flavour than the common mussels. Walton soon decided to plant more posts, not to support wild-fowl nets, but to attract the mussels, and from this primitive beginning the mussel industry of Esnandes has sprung. The mud-banks are planted with stakes as thick as a vineyard, and the fish are constantly transplanted from one set of piles to another, in order to gain the full benefit of the tide and food best suited to their growth. There is no rent to pay for the mussel-farms, as there is for the Whitstable oyster-beds, for they are on a tidal sea, like the grey, muddy bight of Weston-super-Mare, and the mussel-spat has not to be purchased like oyster-brood, but appears spontaneously like grains of seed on the posts.

The cockle-fishery, though it ranks below the industry of mussel culture, because cockles cannot be "cultivated," is far more popular on the coast than the more artistic occupation of mussel-farming. It is a sand-bank fishery, and perhaps the most primitive form of sport surviving—older even than coracle-fishing, to judge by the piles of cockle-shells found near prehistoric settlements. No one probably has computed how many thousands of acres of "cockle-strand" underlie the surface-sands of Morecambe Bay, the Wash, the Welsh estuaries, and those of the South Devon coast, or the annual value of the fish sent to London, Manchester, and Birmingham. They are out of season from May to August; but excepting these months the cockle-fishing goes on without interruption. In the Wash, carts are driven for miles on to the sand to bring back the cockles, the last part of the journey being often a dangerous race against the flowing tide. Evidence of the solid merits of cockles may be seen in the fact that wherever found they are locally in high esteem for the table. There is no dish in which oysters are commonly used as an ingredient in which the cockle is not a useful substitute. In some estuaries the "winkle" fishery goes on side by side with cockle-gathering. In Brading Haven, before its reclamation, were some of the best cockle-strands

and "winkle" grounds in the South of England. The fishermen used to gather them in immense quantities at low tide, especially on certain banks near which a submarine spring of fresh water bubbled up. As the tide fell, the men would bale up this fresh water, which then displaced the salt, and boil their periwinkles in the boats. Each week a "winkle-boat" left the harbour and sailed direct to Billingsgate, where the sea-snails were disposed of at a handsome profit. They were known in the market as "Old Church winkles," from the fact that at the mouth of the Brading Haven stands the ruined tower of old St. Helen's Church, a sea-mark well known to sailors. Last, but not least, of the minor shell-fish are the whelks. These are a valuable and certain source of livelihood to the East Coast fishermen. Thousands of tons are taken in "cages" like iron lobster-pots, and sold either for bait for the cod-fishery or for the London market. Four pounds a week is easily earned by two men owning a boat, during the greater part of the year, and the supply does not appear to diminish. Cockles, on the other hand, and, on some parts of the coast, the mussels, are decreasing in numbers. Some of the cockle-strands are said to be "poisoned." In others the cockles have migrated or have been over-fished. Scallops grow annually scarcer in our shallow waters, but the catch in the Bay of Caen, on the opposite side of the Channel, is so great that the supply will be maintained for many years.

A NEW METHOD OF ADMINISTERING IRON.

It is claimed that a French physician has discovered a method by which iron can be given in large doses. Hens, he noticed, have powerful internal organs. They can digest considerable quantities of iron and then render it back through the albumen of their eggs in a form which is easily digested by the weaker stomachs of mankind. So he feeds his hens with what he calls "a very absorbent salt of iron," mingled with grains of wheat, and they lay eggs extremely rich in iron already digested.

HOW ENGLAND LEADS THE WAY IN SANITATION.

In a few days representative hard-working sanitary officials will be proclaiming to Belgians at Brussels, Antwerp, and other places, how enlightened England leads the way in sanitation. It is a good time to ask—Do we? No one will deny that England was the pioneer in sanitation, but there exists many strong reasons which justify the assertion that we are content to swagger, and live on the memory of the past; do little to advance sanitary science, and so far as regards thousands of places in the British Isles show how little real claim we have to lead the way in sanitation, by allowing to exist filthy conditions which, if found abroad, would excite our disgust and loud-mouthed indignation. Let anyone contrast the average English dwelling-house, shop, or warehouse with, say, the Antwerp one. Every day sees the shop-front and the pavement washed free from mud in the principal parts of Antwerp. Every three years or seven years sees such cleanliness and sanitary necessity practiced in England, and even our Regent-street shop-fronts are below the window-line a filthy disgraceful eyesore. To wash them is the last thing thought of. They are cleaned only when the repairing lease enforces repainting. Sanitary inspectors visiting Antwerp ought not to fail to note this object lesson by the "darned mounseer."

Everywhere in England we are extending our filthy, polluting, water-carriage system of sewage, our costly chemical processes, tanks, sewage farms, and ignorant fads; and consequently everywhere we see diphtheria claiming more victims. Well, Antwerp has no sewers.

It has that anathema the cesspool, but its death-rate is only 15 per 1,000, because its rulers believe in wide streets, open spaces, and plenty of air. It does not possess such gigantic monuments of folly and waste as we do at Barking and Crossness, nor a fleet of steamers to dump fish-choking and poisoning refuse into the ocean. Bremen treats its sewage by a system which for profit, perfect sanitation, and common sense is fifty, or, for a matter of that, a thousand years in advance of our systems. In scores of things the sanitary inspectors will find England very far behind indeed. True, they may come across an abomination here and there, but we cultivate choice specimens ourselves. One correspondent writes:—

I know one large warehouse in Wood-street where they have over 60 girls and three small w.c.'s in an attic, and one or more of these out of order, no water. At this same house 40 girls work in a 20 space. The sanitary inspector has visited this place, but there has been no alteration.

Dr. Waldo has just reported of St. Georges that the Borough-road district still shows the terribly heavy death-rate of 27·2 per 1,000. But during the years 1892-95 it was 30·51, and during last year the death-rate for the entire parish, high as it was, touched the lowest point to be found in records extending over 50 years.

A correspondent of the *Eastern Daily Press* writes of Yarmouth:—

"Sir,—I am a kernoozer in stinks. Yours is pretty thick at Pockthorpe. Perhaps it cannot be helped there. Have you ever smelt a Canton mud-boat? The Chinaman says, 'You no likee Pekoe-flavour stinkee!'"

"But of all the stinks I ever found out commend me to Yarmouth—the 'Brighton of the East Coast' (thank you!). Panting for ozone, I came to this town—golf-bag and all. I found the links on the North Denes second to none in England. But I was very nearly stifled by the most deadly smell I ever experienced. Suddenly the fresh air gave place to a sickening gas. This, it appears, comes from some manure works on the river Bure. We gave up golf and fled to the club house for something reviving. I am told 'this is nothing to what it is sometimes.' Quite enough for me.—GOLFER."

On August 25 an inquest was held at Tottenham respecting the death of Ernest James Brace, aged two years, lately residing at 45, Tilson-road, Coleraine-park, Tottenham.—Jane Maria Brace, the mother, stated that the deceased was in the best of health up to Sunday night, when he was seized with diarrhoea, which continued up till eleven o'clock on Monday morning, when he had a fit and died.—The Coroner: I believe the drains in your house are out of order?—Yes, sir, the stench is horrible. The next door drains have been stopped up for weeks.—The coroner: Have you spoken to the landlord?—Yes; every time they came for the rent I complained, and now my little girl has caught the complaint.—Mrs. Rhoda Baldwin, of 47, Tilson-road, stated that she lived next door to the last witness. The drains of her house were very bad. They had been completely stopped up for seven days, but were opened that morning.—Dr. Charles E. Hutt, of 530, High-road, stated that death was due to exhaustion from vomiting and diarrhoea. Witness, continuing, said that he had that morning been and examined the house. The stench was the worst he had ever smelt; in fact, it was overpowering. Witness intended drawing the attention of the medical officer of health to the case.—The jury returned a verdict "that the deceased died of exhaustion following diarrhoea, and that such diarrhoea was aggravated by the bad state of the drains."

Had this been a civilised jury they would had

returned a verdict of manslaughter against the landlord, but as it is, our only wonder is that they did not subscribe to present him with a gold watch or something for so well showing how England leads the way in sanitation.

A Mr. Thos. A. Sands, of Aston, writes:—

"I should like to ask what about the death-rate of Aston? I have an ash tub which is supposed to be emptied every week, but which has been allowed to remain full since the beginning of February last, that being the last time it was emptied, and then only after repeated application to the Local Board and Medical Officer of Health."

We have written these plain facts in case any of the visitors to Brussels should feel in the mind to indulge in crowing. If they have a bad attack of Anglomaniya, let them go to the Brussels *palais de justice*, and compare it with our hideous insanitary jerry-built law-courts. That object-lesson will do them more good than a pill.

THE BAD MEAT TRADE AND RIDICULOUS PENALTIES.

We do not understand the leniency the bulk of magistrates show to public poisoners or would-be poisoners. Let some poor hungry wretch snatch a loaf of bread, prison is his fate, but far worse criminals who for gain do not hesitate to run the risk of poisoning scores of their fellow creatures, instead of having gaol or the cat, are let off regularly with fines of a few pounds.

The following are cases in point. The *Newcastle Daily Leader* calls the penalties heavy. In our opinion, they are direct incentives to public poisoning, and certainly in the case of the Blaydon Co-Op. Society justice demanded that the person responsible should have gone to prison:—

At the Newcastle Police-court, on August 26, before Mr. Hedley and Mr. Cowell, Nicholas Bousfield, farmer, of Kaber, Kirkby Stephen, was charged with having deposited for sale in Mr. Tindall's meat market, Newcastle, the carcase of a cow, four quarters of beef, unfit for human food.

Mr. R. S. Holmes, who prosecuted, said defendant was a cattle dealer and farmer, and the cow in question, which belonged to him, was taken ill on July 25 of milk fever. Some aconite was given to it by one of defendant's servants, and a veterinary surgeon was sent for, as defendant was from home. The veterinary was also away, and so the servant fetched a man named Morland to look at the animal. Morland said it was no good doing anything except killing the animal, for it was unable to get up. The cow was killed, and the following morning sent to Newcastle.

The Chairman (Mr. Hedley): Was that in the absence of Mr. Bousfield?

Mr. Holmes said it was, but it had been decided that personal knowledge was not necessary on the part of a defendant, who was responsible for the action of his employes.

Mr. Hedley, market inspector, gave evidence to seeing the meat on July 27. It was unfit for food, as the cow had, in his opinion, been suffering from milk fever. He called in the medical officer, and the meat was taken before Dr. Philipson, a Justice of the Peace, and destroyed.

Dr. Armstrong stated that the meat was quite unfit for food when he saw it.

Mr. J. B. Tait, salesman to Mr. Tindall, said his attention was called to the beef on the day of its receipt, and he had it put aside. On the following morning it was seen by Mr. Hedley and seized.

Albert Denham, employed by defendant, said he thought when the cow was taken ill it was suffering from sunstroke. Aconite was given it, and it was afterwards killed by the order of Mrs. Bousfield, and sent to Newcastle.

Defendant explained that he was away from home from Saturday morning till Monday. When he left, the cow, which was a young one he bought in the spring, was grazing in the field all right. He would not be surprised at meat being bad on the Tuesday, when it was inspected, if killed on the Sunday. It was no wish of his to send bad meat to market. His wife sent the meat to Tindall's in the belief that it would be inspected before it was offered for sale.

A witness named Morland gave evidence that when the cow was killed the carcase was a good one. There was a general belief that the cow was suffering from sunstroke. Cross-examined, witness admitted that when he saw the cow on July 25 he thought it had little chance of mending.

The Bench imposed a fine of £5 and costs.

A Scotswood-road butcher named Borrowdale was also summoned for a similar offence.—Mr. Holmes prosecuted, and the evidence of Mr. Hedley and Dr. Armstrong showed that two parcels of meat, weighing 19lbs. and 20lbs. respectively, which he sent to Tindall's on July 22, were in a very bad condition.—Dr. Armstrong said the meat was green and maggoty. It appeared that defendant had not sent it in in his own name.—Defendant said he was ill at the time, and did not know the meat was in such a bad condition. He had not served his time to the trade, and his man had left him suddenly.

A fine of £10 and costs was imposed.

A third case was that in which the Blaydon Industrial and Provident Society, Limited, were summoned.—Mr. Holmes prosecuted, and the representative of the defendants pleaded guilty.—It appeared that on July 22 the defendants' butcher at Lemington, who had been in the habit of sending to market heads and other pieces of meat he did not require, sent in 24 pieces of pickled beef to Mr. Tindall's. The meat was found to be putrid by Dr. Armstrong.—The representative said although they did not know the meat was sent to Newcastle, they were, of course, responsible for the act of their servant, who had apparently sent the meat away without examining it himself.—The Chairman: At the risk of someone being poisoned.—The representative said the society had no wish to do anything of the sort.—A fine of £10 and costs was imposed.

Newspapers, whose writers consider fines like these "heavy," only show an incapacity to realise grave public dangers. As for the following cases, they are scandalous miscarriages of justice, and magistrates guilty of such folly should be forced to eat some of the vile stuff themselves.

William Horrocks, butcher, Chapel-street, Salford, was summoned before the Salford justices, on August 27, on the charge of exposing unsound meat for sale.—Inspector Fordham said that on June 19 he called at the defendant's shop and found several pieces of beef and mutton which were unfit for food. There were altogether 122 lbs. of meat, which he seized and afterwards destroyed. On behalf of the defendant it was stated that he purchased the meat in a sound condition on the previous day. The weather was very hot at the time. The defendant had now given the shop up.—Sir Richard Mottram, the presiding magistrate, said he saw the meat, and it was certainly unfit for food. The defendant had been fined before, and he must now pay a fine of 50s. and costs or go to prison for a month.—At the same court Walter Dawson, of Robinson's-buildings, Weaste, was summoned for exposing 24 tins of potted meat which were unfit for food.—Inspector Fordham said he called at defendant's shop on August 11 and found 24 tins of brawn, which he seized and afterwards destroyed.—For the defence it was contended that the stuff was not exposed. The defendant was away at the time, and was not aware of the condition of the brawn. He was fined 24s. and costs.

LINSEED MEAL.

At Ballyclare, Ireland, on Aug. 19, the adjourned case under the Food and Drugs Act against Richard M'Gee, grocer, &c., Ballyclare, for having sold adulterated linseed meal, came on for hearing. Sergeant Phillips was the complainant, and Mr. Beggs appeared for the defendant.—The sergeant stated that on June 17 last he entered the defendant's shop and asked if they sold linseed meal. On getting an answer in the affirmative he asked for some superior linseed meal. On getting what he wanted he told the assistant he intended to have it analysed. Witness handed in a certificate from Professor Hodges, which stated that there were five parts in a hundred farinaceous matter.—Mr. Beggs handed in a certificate from Sir Charles Cameron showing that the meal contained only three parts of farinaceous matter. He also examined Miss M'Gee, who stated that she did not remember the complainant telling her he was going to have the meal analysed. Mr. Beggs submitted that the omission was fatal to a conviction, as was also the fact that the meal had not been divided into three parts. Proceeding, he said that everyone knew the best flax came from Riga, and all Russian flax contained the seeds of weedy matter. Inasmuch as this sample contained this excess of unavoidable matter, he urged that there should be no conviction.—The Chairman said they believed all the evidence: but, having regard to Sir Charles Cameron's certificate, they would dismiss the case, as the amount of foreign matter was so small.

ALLEGED OFFENCE UNDER THE MERCHANDISE MARKS ACT.

At Greenwich Police Court, on August 27, before Mr. Paul Taylor, William Henry Cullen and Arthur Thomas Casey, of Devonshire House, Forest Hill, were summoned at the instance of the Bacon Curers' Association for unlawfully applying a certain false trade description to goods, to wit, "Bath hams" to certain goods, to wit, American hams, contrary to the statute.—Mr. Weeks, solicitor, prosecuted on behalf of the Bacon Curers' Association, and Mr. F. W. Beck, solicitor to the Metropolitan Grocers' and Provision Dealers' Association, represented the defendants, whilst Mr. Dumas, barrister-at-law, watched the case on behalf of Messrs. Titley, ham curers, of Bath and Bristol, the producers of the Bath hams.—The solicitor for the prosecution gave brief details of the case, and then called John Moore, an inspector of the Bacon Curers' Association, who stated that he went to the shop window of the defendants on April 10 and saw a label bearing the words "Titley's Bath Hams, 9d. per lb." covering two hams. Witness went inside and asked the shop-boy, Casey, for one of Titley's Bath hams that they had in the window. Casey took out the ham produced and weighed and said it would cost 6s. 3d. Witness then told the lad Casey who he was, and asked him if he still said the ham produced was a Bath ham. The lad replied that they bought them from Titley's, and that was all he knew. Witness called for the manager, and explained the facts of the sale to him, and he excused the sale on the ground that the ham produced was branded with the words, "Titley's best brand." He (witness) paid 9d. a lb. for the ham. He could have bought tons of American ham at 7d. per lb. Good English ham would cost about 11d. or 1s. per lb.—By the Stipendiary: There is a difference of 5d. or 6d. per lb. between English and American hams.—Further examined by Mr. Weeks: An ordinary buyer could not distinguish between English and American ham. Witness was given an invoice when he bought the ham.—Cross-examined by Mr. Beck: American hams were

quoted in the trade journals at 4os. to 5os., and would be sold in the same state as the ham produced. He (witness) did not point to the ham in the window, and say, "Let me have that ham." The assistant did not state that it was a foreign cure which they got from Titley's. Witness told the manager something about the ham having been sold in a straightforward way, but that the ticket was to blame for the mischief. Witness said the word "Bath" did not refer to the cut.—John Johnson, who accompanied the last witness when he purchased the ham, corroborated the evidence given.—William Nightingale said he was manager of the branch establishment of Messrs. Hudson, provision merchants, at Cannon-street Railway approach. The ham produced was an American ham, and a fair price for it in April last was 7½d. per lb. At that time the price of English ham was about 1s. per lb. According to the trade custom it would have been wrong to put the ticket produced on the ham produced. A "Bath chap" referred to the cheek of an Irish or Wiltshire pig, but he could not say as to American pigs. Cross-examined by Mr. Beck, witness said he had never sold American pig's cheek as Bath chaps. He had sold thousands of Bath chaps. He knew that Bath chaps were sent from America. The term "Bath chap" in the trade meant that part of the pig's head known as the cheek. Witness did not know that a great deal of Harris's Wiltshire bacon was imported into Wiltshire.—At this point the magistrate (Mr. Paul Taylor) said he must adjourn the case.—Mr. Beck said his defence, so far as Cullen was concerned, was that he was not criminally responsible for the act of his servant at all. That was an important point in all these prosecutions, and he would ask for leave to argue it fully. He would argue further that if Cullen was responsible at all for his servant's acts he had taken the necessary steps to place himself within the exemption clause of the Act. In the case of Casey his defence was that there was no fraud intended, and that it was quite possible that the custom of the trade justified his act.—Adjourned for fourteen days.

MARGARINE.

At Glasgow Summary Court, Sheriff Fyfe disposed of four margarine prosecutions. James Chaplin, 180, Crookston-street, was charged with exhibiting margarine without a label attached. The accused stated that he was absent in the country visiting friends. The Inspector stated that the person in charge went the length of stating that it was pure butter. Chaplin was fined £2 10s. including expenses.—Richard Hair and Co, 126, Stockwell-street, were charged with a like offence, and fined £3 10s., including 30s. expenses.—Robert Hillies, 32, Port Dundas-road, was fined £2 10s. with expenses, for a similar offence.—James Broadbent, 75, Maitland-street, on being charged, stated that he had one side of his shop devoted to margarine and the other to butter, the word "Margarine" being exhibited over the goods of that description. He is an amateur photographer, and exhibited a photograph to prove that this was the case. The Sheriff said that the Statute provided that every parcel of margarine must bear a label, and imposed a penalty of 30s. to cover the expenses of the prosecution.—Thos. Paterson, 54, Milton-street, in whose shop margarine was also exposed without the necessary label, said that he had various shops, and that the one in question was a branch in charge of a lad, who had plenty of labels to place on the goods. He had no intention to defraud, and, further, even the most ignorant person knew that for 8d., 6d., or 4d. they could not get butter. The Sheriff said that the intention of the Act of Parliament was to prevent people being imposed upon, and fined the accused £2, with 30s. of expenses.

At Salford, on August 28, Emma Barrett, provision dealer, Tontine-street, was summoned for selling margarine as butter, and also for selling margarine not properly labelled. Inspector Crossley said that he made a small purchase at the defendant's shop on July 24. The article purchased was not labelled margarine, but the analyst found it to be margarine. The defendant said she sold the article as she obtained it from a wholesale dealer named Wright. Before the magistrates gave their decision a summons was heard against John Wright, of Chapel-street. Inspector Crossley said that in consequence of what the last defendant told him he went to the shop of Barrett, and saw a youth there bring two parcels into the shop. He asked the youth for three-quarters of a pound of butter, and for this he paid 9d. It was sent to the analyst, who certified that it was margarine. The article was given to him in a paper which was not labelled with the word margarine. For the defence it was stated that the butter and margarine were kept in a dark cellar, and an error must have been made. There was no intention to defraud. The youth who delivered the goods said that he did not know which of the parcels was margarine, and he "took a shot at it." The summons against the defendant Barrett was dismissed. Wright was ordered to pay a fine of 20s. and costs on each of the two summonses. Mr. C. L. Evans, deputy town clerk, prosecuted.

SALT IN BEER: A PUBLICAN FINED.

At Baschurch Petty Sessions, John Bayley Timmis, licensee of the Talbot Inn, Ruyton-xi-Towns, was summoned for selling beer which contained about 62 grains of common salt to each gallon.—Police-constable Thomas deposed that on the afternoon of June 14 he visited defendant's premises with Police-constable Gough. They were in plain clothes. Witness called for a quart of beer, and told Mrs. Timmis they wanted the beer to submit to the public analyst. She then fetched the defendant, who said to his wife, "Which barrel did you draw the beer from?" She replied, "The first one." Defendant said, "Well, it's all right; it's the same I have had." Witness divided the beer into three parts—one he left with the defendant, one he took to the analyst, and the other he produced in Court.—In reply to the Bench the defendant said the house he occupied was a tied house, and the beer he sold was supplied to him from the brewery at Ruyton-xi-Towns. He could not afford to have every barrel of beer analysed that came into his house.—Mr. Bowen-Jones: In a case of this sort we have to deal with the seller.—Defendant was fined £1 6s. 6d. including costs, and also ordered to pay the analyst's fee, £1 1s.

POISONED BY PARSNIP WINE.

Information has been given to the Worcester District Coroner of the death of Edwin Bowkett, 50, labourer, of Acton Beauchamp. Deceased was helping his brother Charles to empty a cask of parsnip wine, which a month before had, though the barrel was carefully cleaned out and scalded before use, been found to be bad, Charles and his niece having been taken ill after drinking some of the wine. Deceased drank half-a-tumbler full of the wine, and later drank another half-tumbler with some cider. He was taken bad almost immediately and vomited. He died during the night.

REIGATE AND THE BRUSSELS SANITARY CONFERENCE.

An amendment having been carried by the casting vote of the Mayor, throwing out the recommendation that Mr. Humphery should be allowed £5 towards the

expenses of his visit to Brussels, several members of the Sanitary Committee regarded the course adopted as opposed to the interests of the borough, and agreed in the Council Chamber to find the money themselves for the Sanitary Inspector's expenses.

DANGER IN CARBOLIC WASH.

PROF. CZERNY, of Heidelberg, warns against the indiscriminate application of carbolated wash, since it frequently gives rise to the so-called carbolic gangrene. This is caused by the clogging of the capillaries, due to the action of the phenol on the blood corpuscles. The author advises the use of less harmful antiseptics, as solutions of salicylic or boric acids, alum, or corrosive sublimate.

DISINFECTANT SOAPS.

By. S. RIDEAL, D.Sc. LOND., F.I.C.

NOTWITHSTANDING the recent increase of our knowledge of disinfectants, little attention seems to have been paid by soap manufacturers to this subject, so that even at the present time, soaps which were introduced many years ago still find favour with the public, although their efficacy as germicides is very small. This has arisen partly from the fact that it is seldom that disinfectant soaps are properly tested as to their germicidal action upon specific organisms under conditions which approximate to their use in practice; and partly owing to the fact that there are many disinfectants which have valuable properties, as such, but which are totally unfitted for use in conjunction with soaps.

The conditions which obtain when a disinfectant soap is used are very different from those of ordinary disinfecting. As a rule the time of contact is much shorter, and the volume of water or vehicle much less. As the time of contact is short, so it is necessary that the percentage of active ingredient should be high. As the volume of water used per unit weight of disinfectant soap is usually much less than is recommended when a liquid disinfectant is employed, this usually assures a higher percentage strength of the active ingredient if it is present in the soap in anything like reasonable proportions. On the other hand, it is important to note that unless the disinfectant employed is readily soluble in water, actual contact of the infected parts with the disinfectant cannot be attained in the limited time given to washing. In coal-tar soap and those containing oils which are not very soluble in water, although the disinfectant is emulsified by the soap, the actual laving of every part of the infected area by the active ingredient for the necessary time to effect the death of the micro-organism is by no means certain. Organisms differ very markedly in their resistant power; many of them form spores which are especially difficult to kill, so that even when a soap contains an approved disinfectant the latter must be present in quantity above that required for the fatal dose for the most resisting spores.

Although at the present time there is no legislation on this matter, medical men and the public are becoming alive to the importance of thorough disinfection in all cases of infectious disease, and those soaps which can be relied upon as containing definite amounts of active disinfectants are already making headway against others which are of more uncertain composition. It is, therefore, of extreme importance to the soap manufacturer that he should not only carefully select his disinfectant and ascertain its purity and efficiency, but should also devote especial care in admixing this ingredient in the right proportion, the exact amount of the medicament being stated on the wrapper of each piece.

The stock or basis of a medicinal soap is by no means unimportant. F. Krafft and A. Stern (*Ber.*, xxvii., 1747), in confirmation of Chevreul's early work, have found that soap in a large quantity of hot water gives a precipitate of the sodium salts of palmitic and stearic acids, while sodium oleate, not being so readily decomposed, remains in solution along with free alkali. An olein basis would therefore seem preferable to the employment of a harder fat.

The alkali of commercial soap is, of course, soda, but potash or soft soap figures in the German Pharmacopœia as "*sapo kalinus*" or "*sapo viridis*." It is generally made with linseed oil, has a pale brownish-green colour, and is reckoned to be specially beneficial in some skin diseases. It would be useful to determine whether an admixture of a potash soap with the ordinary soda soap would produce a basis giving greater activity when used in such proportion as not to give too great softness to the product. E. W. Lucas has already shown (B.P. Conference 1894) that a mixture of one part potash to five of soda soap solidifies, and can be advantageously employed as a basis for liniments. The solubility of drugs in a potash soap does not appear to have been investigated.

Unna and others are of opinion that mendicaments are more easily absorbed if the soap is "super-fatted," or contains an excess of the fatty menstruum, but however preferable for toilet purposes as more emollient to the skin, these soaps seem not to be so suitable as vehicles for many drugs as those containing a moderate excess of alkali. The presence of free oils or fats is distinctly inimical to antiseptic action. Koch was the first to point out that carbolic acid dissolved in olive oil or carbolyzed oil possessed no antiseptic properties. Lenti (*Union Pharmaceutique*, xxxv., 58) concluded from his observations that fatty substances were unsuitable vehicles for disinfectants, as they impeded the germicidal action of mercuric chloride, phenol, and several other bodies. Dr. Breslaner has lately repeated these experiments with various disinfectants, including mercuric chloride, boric acid, nitrate of silver, etc., in union with oil, vaseline, lanoline, etc., and found that while lanoline gave the best results, the presence of the free oil or fat, strongly militated against the germicide, the various bacilli surviving in oil far longer than in aqueous solutions. Jicario noticed, in 1891, that fixed oils frequently contained germs. From these and other observations it has been recognised that oils and fats used in ointments and soaps must be sterilised by heat; usually this is done in course of manufacture.

It must be remembered that soaps themselves have considerable antiseptic power. Some recent experiments of Max Jolles (*Zeits. f. Hygiene*, 1895, 130) have shown that in the case of typhoid bacilli the disinfecting action is more marked at 4 deg. to 8 deg. C. than at ordinary or higher temperatures, therefore that with cold water they would be more active than with hot. When rags infected with germs were treated with a soap solution the effect was very marked, even a 1 per cent. solution being injurious to the germs in fifteen minutes, and a 6 per cent. solution resulting in their entire destruction. A 30 per cent. solution was fatal in one hour, and in 1 per cent. no germs remained capable of development after two hours' immersion. *B. coli communis* was less easily destroyed at low temperatures; a 2 per cent. solution was fatal in six hours.

There is no doubt that prolonged contact with soap renders surfaces practically sterile, but under ordinary circumstances ordinary soap ceases to be effective. Beyor ('*Firstchrift der Medicin*, No. 1, 1897) has shown that in the case of hospital clothing with various surgical stains, soaking the garments in solutions of various soaps for one or two days failed in every instance to kill cholera, typhoid, and pyogenic organisms. He attained success with lime-water in from 24 to 28 hours, but woollen goods were spoiled. In this case if the soap had been supplemented by a

good antiseptic more favourable results might have been attained.

With reference to medicinal agents used in soaps, acids and free halogens are obviously incompatible, the former being neutralised by the alkali or precipitating the fatty acid, the latter combining at once with the fat. A hypochlorite of K or Na is incompatible to a certain extent, but the disinfectant action is much less than that of free chlorine. The oxygen compounds of bromine and iodine do not seem to have been studied in this respect. A vast number of organic bromo and iodo compounds have been introduced. Some of them seem to be useful, but most are irritating; the majority have very unpleasant odours.

Fluorides and silico-fluorides were found by Wm. Thompson to be strongly antiseptic and non-poisonous, and were patented under the name of "*Salufer*." We have not heard of them being used in conjunction with soap, although Thompson states that a solution of sodium silico-fluoride is not irritating, and "is stronger than 1 per 1000 solution of HgCl_2 ," and obviously compatible with soap.

SULPHUR.—Sulphur and alkaline sulphides blend well with soap, and have long been known as useful in skin diseases. Sulphur even in the form of milk of sulphur is very slow in its action, on account of its insolubility. The alkaline sulphides are caustic, having been used from Roman times as dipilatives; and recently ichthyol and sphagnol have been suggested as convenient means for incorporating sulphur in soaps, most of these gradually involving H_2S , and therefore yielding an unpleasant odour, and are not popular, although this gas is a prominent feature of their antiseptic action.

BORIC ACID in soaps could be converted into sodium borate, and would have little or no value.

METALLIC SALTS.—These can only be introduced into soap in very small quantities, as all except the salts of Na and K are precipitated in an insoluble form, and in washing disappear from the water to the curd, which can have little effect or value.

VARIOUS OLEATES or solutions of metallic oxides in oleic acid, more or less well defined as compounds, have been introduced into the Pharmacopœias. They mix well with unguents, and are said to be more readily absorbed, and less irritating than older remedies. Hence it has been proposed to incorporate them with soaps. But since the efficiency of soap depend upon its solubility in water, the curdy precipitate, as mentioned above, is probably inert, since also the oleates of metals are insoluble in water, the question arose as to how far an oxide or an oleate could be made soluble for use in ordinary washing. As an example, I dissolved some zinc oleate, B.P., in a minimum quantity of soda, to the hot clear solution I added 10 grammes of yellow soap and incorporated. When cold, the soap separated from the mother liquor, which was strongly alkaline and contained practically all the zinc. This process not working, zinc hydrate was prepared and boiled with soda to form a zincate solution as neutral as possible. Yellow soap was then dissolved in the filtered solution, boiled down, and allowed to set. It formed a soap of good washing qualities, not unduly alkaline; on using with water in the ordinary way the zinc was found to be in solution, showing that there was no separation of insoluble zinc oleate. It would therefore seem that metallic oxides dissolved in soda or potash might give better results than the ready-made oleates. Manganese soap, prepared by double decomposition of manganous sulphate and soap, or by heating manganous carbonate with oleic acid, is said to be a strongly siccative application.

(To be continued.)

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Food and Sanitation.

SATURDAY, SEPTEMBER 11TH, 1897.

LORD LONDONDERRY ADVOCATES DISEASE DISSEMINATION.

[*"Dairy farmers in this country have a genuine grievance in being compelled to produce milk and butter under the best sanitary conditions, and to compete in their own market with an unlimited quantity made in Denmark under no kind of sanitary conditions at all."*]

The above utterance is the calm, deliberate statement of a person who claims to rank as a statesman

who has been Viceroy of Ireland, is a territorial magnate, and has an important influence in the legislation of the United Kingdom. It is by Lord Londonderry, reported in the *Daily Graphic*, September 1. We have heard and read many dangerous statements by men of supposed light and leading, but we doubt if even the worst minded and ignorant of politicians could sink to a deeper depth than this ex-viceroy and statesman has done in his speech at the Sedgefield Agricultural Show on August 31. It is not a pleasant thought that any body of Englishmen can be found so servile as to refrain from discountenancing such an utterance because it comes from a lord. Put into plain English, what does Lord Londonderry complain of? He complains that the dairy farmer is compelled to preserve sanitary conditions in his business, *i.e.*, that he must no longer, as he did in the bad old times, wash his pans in sewage-polluted water, have his sheds ankle deep in foul, reeking animal droppings, and send out milk loaded with deadly germs to the public, spreading suffering, disease, and death broadcast. There is no article so liable to spread infection as milk is, and even with the sanitary restrictions which Lord Londonderry considers "a genuine grievance," a great amount of disease is now disseminated by milk, as was not long ago evidenced at Hornsey and Islington, where milk produced in Derbyshire under the insanitary conditions desired by Lord Londonderry scattered disease broadcast. Milk is the principal food of infants, but, out-heroding Herod, Lord Londonderry would not only have infants doomed to typhoid, scarlatina, etc., but would give filth a free hand, and spread disease and death everywhere amongst adults, in order that his class—the landlords—may spend a little less in necessary public health work, sewerage, drainage, pure water supplies, and the like, and be enabled to screw more rent out of their tenants, who now have to spend some money which could be extorted as rent in sanitary improvements required for their own health and the safety of the public. Such opinions are worse than those of the most raving anarchist. Yet their author was on Tuesday posturing before the Duke and Duchess of York in Ireland and proud of having entertained royalty nineteen times.

He would be better if he entertained beliefs less like unto those of Swifts Yahoos, which were, after all, only the creation of a satirist, whilst Lord Londonderry's are the deliberate expressions of a person posing as a statesman, who has been Viceroy of Ireland. We hope, for the well-being of humanity, that even amongst lords this insanitary person will find no imitators and no followers.

If his knowledge of political requirements equals his sanitary knowledge, Lord Salisbury is to be congratulated on his revolt. In case any one should think this plain speaking harsh upon his lordship, we may point out that Dr. Harris, Medical Officer of Health, Islington, states that his investigations in the provinces, and especially in Derbyshire, convinced him that the country cowshed was not in so good a sanitary condition, nor so clean, as the shed in town is. Until there is a guarantee that the country cowhouses are inspected systematically by the rural authorities, he will therefore continue to advocate the existence of such places in London. Dr. E. W. Hope, the Medical Officer of Health for Liverpool, found that out of 24 samples of milk taken at the railway stations, seven samples, or 29.1 per cent., were able to infect guinea-pigs with tubercle, while out of 144 samples taken from the sources within the city only three, or 2.8 per cent., were tuberculous, and this country condition of things Lord Londonderry wishes to foster and extend.

SEWAGE PURIFICATION.

BY GILBERT THOMPSON, C.E., GLASGOW.

At the Sanitary Congress, Dundee, Mr. Thompson said:—"That while it would appear as if the future progress of sewage purification would be largely dependent on bacteriological research, the new methods not yet so completely proved their superiority as to drive the others out of the field. There were still many competing systems full of vitality, and his object was not to advocate one or another, but to show the main lines on which recent advances had been made. At the present time there were three chief methods of treatment—on land, by precipitation, and by bacteriological methods. The system of land treatment still held its own, but it was doubtful whether it would continue to do so, as there were greater chances of improvement in connection with the newer methods. It was in connection with the precipitation methods that mechanical ingenuity had had most scope. In all of these the general features were similar. A quantity of some precipitant was added to the sewage which was then run into settling tanks so that the sludge might settle. In recent times improvements had been made in the design of the tanks so as to produce the maximum precipitating effect, in the methods of removing the sludge from the tanks, and in the subsequent treatment of the sludge. As to the first of these, the Cosham tank might be given as an example. The ordinary tank was rectangular, or occasionally circular, in shape, and the bottom was nearly or altogether flat, while the sewage either passed from one tank to another over a simple system of division walls or remained quiescent in the tank which it first entered. The Cosham tank, on the other hand, consisted of a number of cells, and the sewage passed from one to another through what was called 'flocculent flues.' At Nuneaton, which was said to produce the foulest sewage in England, excellent results were obtained, and there was a most marked contrast between the stream of exceedingly foul sewage entering the works and the affluent which entered the small stream, and which appeared to contribute to its purity rather than to its pollution. Those in charge of the Nuneaton works put much more stress on the construction of the tanks than on the particular substance used as precipitant, and they believed that their present success, after a number of failures, was due to the working of the flocculent flues. Not only in the settlement of the sludge, but also in its removal from the tanks, improvements had recently been made. By the system of first emptying the tank and then allowing the sludge to run by gravitation into a 'sludge well' there was the disadvantage which was specially felt in small works, that the sludge was delivered at the lowest possible level, from which probably it had to be mechanically raised. Several methods had been adopted to get over this difficulty. In the Cosham tanks above referred to, where they had been specially constructed and not merely adapted, the sludge which collected in the side chambers was run into the centre well, and this in its turn was tapered to the bottom, from which the sludge was raised in a syphon pipe, by the pressure of the liquid in the tank, to a level nearly that of the free surface of the sewage. In the Candy tank the same power was used in a different manner. The tank was made with the usual flat bottom, and the system might be used either in rectangular or circular tanks. In the former, a pipe with a slot in it was made to travel along the bottom of the tank, while in the latter a similar pipe was pivoted at the centre and rotated, also close to the bottom of the tank. In either case it was connected to a rising pipe, which passed through the side of the tank and discharged at a level a little below that of the water in the tank. The result was that the sludge was forced into the pipe through the slot and out through

the connected pipe by a pressure corresponding to the depth of the outlet from the surface. The motion of the pipe was so adjusted as to give sufficient time and no more for the sludge to enter the pipe. It was obvious that if the pipe were allowed to remain at rest with the outlet valve open the sewage would simply escape bodily until the outlet level was reached. Not long ago he saw tanks such as this dealing with sewage of a class very different from that of Nuneaton, having been constructed to relieve Windemere of the pollution caused by the sewage of Bowness, and therefore being situated in a district where amenity was of the utmost value. But the comparatively small tanks and filters did not seem to detract in any way from the beauty of the famous lakeland, and although he stayed for some days within a few hundred yards of the works, it was only by accident that he became aware of their existence. The disposal of the sludge was one of the serious difficulties in the precipitation works. In its raw state it could scarcely be disposed of even for nothing, and any treatment involved cost. The method adopted in Glasgow of drying it sufficiently to form a fairly portable manure gave a prospect of some return. The processes which meantime were attracting most attention were those which produced no sludge, or, in other words, which went on the principle of decomposing and reducing to harmless forms all the substances contained in the sewage. They recognise the fact that these changes were associated with the life of certain minute organisms, and they therefore endeavoured to have the changes carried out as speedily as possible by providing conditions suitable to the activity of these organisms. Two developments of this idea had been brought somewhat prominently before them of late—the bacteriological filter and the septic tank. These both depended on the action of the microbes which lived on sewage, but they differed in this respect that while the bacteriological filters depended on one class of these microbes—those which require air or oxygen for their support—the septic tank depended on the so-called anaerobic microbes (those which wanted no air), and it was only when they had done their best with the sewage that it was handed over to the tender mercies of their aerobic brethren in the filters. The septic tank, in other words, was really a preliminary to passing the sewage through a form of bacteriological filters. Having explained the principle of the bacteriological filters, and also the septic tank process, he said the fact that they had not yet reached a final settlement of the sewage question was proved by the circumstance that within the last few weeks they had seen by the newspaper reports that works on each of the three leading methods to which he had referred had been adopted or recommended. This was, of course, so far due to the differences in local conditions, but it suggested, also, the probability that, meantime, there was so little to choose between the best representatives of the various systems that caused more or less accidental, might be sufficient to turn the scale in favour of any of them. Meantime it might be said that while no system can be definitely pronounced the best, they had, at all events, at command, various processes which might be trusted to produce, if properly worked, a satisfactory effluent. (Applause.) But sewage still remained, and probably would remain, an element of expense to any community, and to minimise that expense it was necessary that the system should be judiciously selected, the works skilfully planned, and, what is of no less importance, that the management should be careful and skilful. (Hear, hear.) The public health aspect of sewage disposal was now fairly secure, and it might be hoped that progress in the future would probably affect chiefly the financial aspect. Another aspect which was little considered when speaking of works in general, but which had an unpleasant habit of coming to the front very awkwardly, was the æsthetic one. Sewage works might be, and usually were, conducted so as to cause no actual nuisance.

THE WATER AT SPIRIT PRICE GAME.

AT Kenilworth, on September 1, Charlotte Brewer, Albion Tavern, Kenilworth, was summoned for selling adulterated whiskey. A certificate was put in from the county analyst stating that the spirit contained 3.95 per cent. of water over and above that contained in 25 degrees under-proof whiskey. The defence was that a card was hung in the bar stating that the spirits were diluted, but that when the inspector took his sample the defendant was too flurried to point out the fact.—The Bench imposed a fine of £1 including costs.

AT Newport, on September 1, James Hall, the landlord of the Eastern Valleys Inn, Shaftesbury-street, Newport, appeared before the Court to explain why a pint of brandy, sold to Mr. Spencer Jones, the inspector under the Food and Drugs Act, was adulterated beyond the standard limit of 25 per cent. The result of the analysis showed that the brandy was 33.7 per cent. under proof. Mr. Digby Powell, solicitor, pleaded guilty on behalf of the defendant, and stated that he must have omitted to draw all the water from the spirit cask when he washed it out. Defendant was fined 40s. including costs.

AT Ashford Police-court, Thomas Terry, proprietor of the Eight Bells Inn, Woodchurch, was summoned by the police for selling brandy adulterated with 3.60 degrees of water.—P.C. Cloke deposed that on July 12 he went to the Eight Bells and purchased half-a-pint of brandy and half-a-pint of rum, afterwards telling the landlord's daughter that he had bought it for purposes of analysis. Defendant served him with the brandy and his daughter with the rum. When Miss Terry served him with the rum she asked him to allow her to change the brandy, but he said he could not let her do so.—Supt. Bailey stated that he told Miss Terry afterwards what he wanted the spirits for.—The Public Analyst certified according to the charge.—Mr. H. J. Bracher, who appeared for the defence, argued that as the constable did not tell the defendant himself that he required the spirits for analysis a conviction could not be recorded, but the Bench decided to hear the facts of the case. Mr. Bracher then submitted that the Bench would not convict the defendant on the merits of the case. He said that on the night before the constable called at the house defendant noticed that the brandy keg was almost empty, and he asked his wife to replenish it, as was her usual custom. The next morning his daughter was performing the task, "breaking down" the brandy according to the requirements of the Act of Parliament, but as she was doing so a party of excursionists drove up, and she placed the keg in the bar while she was busy serving them, and afterwards forgot to put the extra half-a-gallon of brandy required in the keg. Her father served the constable with the brandy, not knowing but that it been attended to. Noticing that it did not look right he called his daughter, and she, not being aware that it was a constable who was buying the brandy, asked him to allow her to change it, as it was not right. Mr. Bracher said his client was a most respectable man, and had held the house for 29 years without ever having a charge of any description brought against him.—The defendant and Miss Terry gave evidence bearing out the truth of the story, and Mr. Bracher called as a witness Mr. A. T. Schreiber, who did not adjudicate on the Bench in this case. He stated that he had known defendant for some years, and he was one of the most honourable men he knew.—The Bench, after a brief private deliberation, decided that the police were quite right in bringing the case forward, but after hearing the evidence they were inclined to dismiss it.

THE DILUTED SPIRITS QUESTION.

THE annual Brewster Sessions for the West Powder Division was held at Truro, when Superintendent

Bassett handed to the magistrates a list of seven houses in the division where notices were displayed in the bar stating that all spirits sold in the houses were diluted or no alcoholic strength guaranteed.

The Chairman said the Bench had decided to reserve those licenses for a month and see whether the notices were legal or not, and any holders wishing to have the licenses that day must undertake to discontinue the use of the notices.

Superintendent Bassett said he had sent out notices in the St. Columb district about these cards, and there they had destroyed the cards in the presence of the police. All the innkeepers in Tregoney division had done the same, with the exception of two—one at Probus and one at Tresillian—and these were members of the Licensed Victuallers Association. He had had complaints of the spirits sold at some of the houses where these notices had been hung, but his hands were tied from taking action under the Food and Drugs Act.

MILK.

AT Clerkenwell, on September 1, Stephen Evans, of 360, Liverpool-road, was summoned, before Mr. Horace Smith, by Sanitary-inspector Lawrence, of the Islington Vestry, for selling milk adulterated with added water.—Dr. White, solicitor to the vestry, prosecuted, and Mr. Strong, barrister, defended.—The inspector said the milk on analysis proved to be adulterated with 12 per cent. of added water.—Mr. Strong pleaded that the adulteration was very small, and asked the magistrate to impose the smallest fine he possibly could.—Dr. White stated that the defendant had been previously convicted of similar offences.—Mr. Horace Smith fined Evans £10 and costs.

MARGARINE.

AT Blackburn, on September 1, Jos. Taylor, Knowles-street, Rishton, was summoned at the instance of W. J. Parkinson for having his margarine unlabelled, and also for not delivering margarine in printed wrappers.—Inspector Parkinson said he called at defendant's shop on July 9th and asked what butter was a pound. The reply was 11d. and 1s. He then asked if they had nothing cheaper, as he saw to boxes of margarine exposed for sale on the counter, without labels. He asked the price of this, and was told that it was 6d. per pound. He got three-quarters of a pound, and said to Mrs. Taylor, "Don't you know that you have no business to expose margarine for sale without a proper label with letters 1½ in. in size, and also not to sell it in other than a proper printed wrapper with ½ in. square capital letters?"—For the defence it was submitted that the tubs of margarine had been placed on the counter to be taken away by the carter, as what remained of the contents was turning green. Mr. Read contended that there had been no real sale. Mrs. Taylor only kept the margarine for her private use as a confectioner, and would not have sold the inspector any had he not pressed her.—The Chairman said the Bench would be obliged to impose costs.

IMPROVING THE COLOUR OF MILK.

AT the Brentford Petty Sessions, on September 2, before Mr. A. S. Montgomery, in the chair, and a full Bench of Magistrates, a remarkable case of milk adulteration was heard. Charles Cary, a milk-seller, of High-road, Chiswick, was summoned under the Food and Drugs Act for having sold milk containing 13 per cent. of added water. Mr. S. A. Butt defended. Mr. Tyler, the inspector under the Act, produced the

certificate of the county analyst. Mr. Butt said the defence was that the milk in question was purchased from a wholesale dealer and sold by the defendant just as he received it. The defendant went into the witness box and swore that the milk had not been tampered with in any way, and that no water had been added to it.—Inspector Tyler: Would you be surprised to hear that there was colouring matter in the milk?—Defendant: No.—Inspector Tyler: How did it get there, then?—Defendant: Through the strainer.—Inspector Tyler: Who put it in the strainer?—Defendant: I did.—Inspector Tyler: You have twice sworn that you added nothing to the milk.—Albert Vincent, in the employ of the defendant, said he kept observation on the milk from the time it was delivered at the defendant's dairy. Nothing was added to it.—Inspector Tyler: Was the milk strained?—Witness: Yes; we make a practice of straining it.—Inspector Tyler: Why was colouring matter added?—Witness: It is absolutely necessary to add colouring matter, otherwise the people would not accept it, thinking it was poor milk. It is a general practice for every dairyman to add colouring matter.—Inspector Tyler: Well, I've never had such an answer given me by a witness before.—The Chairman: We have heard enough. The defendant is fined £2 and costs. Subsequently Mr. Butt asked the Bench to give the defendant time to pay, as the fine and costs came to over £5. Time was given.

MOTOR DUST COLLECTORS.

MR. RAMSDEN, the Surveyor to the Chiswick Urban District Council, reports that a week's experience with one of the cars shows that they are very easily controlled, and far more economical than horse labour. The steam waggon does the work of three ordinary carts, and Mr. Ramsden estimates that the Council will save between £500 and £600 a year by the adoption of the new system. As a proof of the ease with which these motors are managed, he cites the fact that the driver of the steam roller learned to control a motor in one or two days, and that the machine easily negotiated the steep incline of Kew Bridge at 150lbs. pressure with a load of two tons. The "steam screw-tip waggon," to give it its full title, is divided into two parts—the cab and the carrier. In the former are the steering and brake wheels, and here the driver stands, and behind him is one of the Thornycroft water-tube boilers, of a type specially designed for the purpose. The engine, which is under the cab, is of the horizontal compound reversing type. The carrier has a capacity of six cubic yards, and is constructed to hold a load of three tons.

WATER DIVINING.

To the Newton Abbot Rural District Council Mr.

Leicester Gataker, water diviner, wrote relating to Kingskerswell water:—"I only judge approximate depth and yield of underground streams of water when I am requested to take on a job of well-sinking or boring for water on terms of 'no water, no pay.' My guarantee for Kingskerswell at the site Mr. Segar wishes the boring carried out will be 15,000 gallons of water per diem, at a depth not exceeding 130 feet. If I fail to get that quantity of water, I get no pay, but if I exceed the depth of 130 feet and continue the work at my own expense, and in the end find the quantity of water guaranteed, then I am to be paid for the 130 feet agreed upon. Your Council, therefore, bearing in mind, and it is quite feasible, that I only judge approximately the depth and yield of underground streams of water, would not expect me to guarantee the exact quantity of water at the exact depth that I predict." On hearing further he would send his estimate. Members discussed the letter, and decided to ask Mr. Gataker for his terms. They said Mr. Gataker would probably require double pay for taking the risk. Mr. Vicary did not think this a business-like way of doing business.

PUBLICANS AND THE WATER AT SPIRIT PRICE SWINDLE.

WE are glad to find our efforts to suppress this fraud are receiving such excellent support from magistrates and the press.

The *Western Morning News* endorses our agitation against the swindle, saying:—

"General sympathy will be felt with the efforts of the police in West Cornwall to prevent the open evasion of the Food and Drugs Act by licensed victuallers. If has come to be the custom to display in many public-houses a notice stating that 'All spirits sold here are diluted. No alcoholic strength guaranteed.' This has been held to be sufficient to absolve the publican from any penalty to which he might otherwise be liable under the Food and Drugs Act. The dilution may conceivably be on so generous a scale that the whiskey or brandy which the customer demands may be three-fourths water. There is no guarantee of alcoholic strength, and if the customer chooses to take it and pay for it he is absolutely without remedy. In the report which the Chief Constable of Truro presented to the licensing magistrates of that city on Monday there is reference to a case in which the Queen's Bench Division held an appeal that justices were wrong in convicting where such a notice was displayed, although the gin which was the subject of inquiry and analysis contained 44 per cent. of water. In Truro a sample of brandy was found to be 36 degrees under proof, or 11 degrees below the minimum strength recognised by law; but there was no possibility of prosecution. When the

"KURRUWA"

(This word is Registered, and used as a Trade Mark for Best Quality Articles only, and has now become synonymous with quality for the following specialities. "We are of opinion that all the products bearing the guarantee of this name may with equal justice receive our highest commendation."—*The Family Doctor*.)

"KURRUWA" DELICIOUS, SOLUBLE COCOA.

Manufactured in England on the popular Dutch principle.

ANALYTICAL REPORTS.

"The Laboratory, Bow and Bromley Institute, London, E.

"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average.

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S., Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London; Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8.

This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

"KURRUWA" CHOCOLATE ALMONDS.

"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*."

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

Please ask your GROCER or CONFECTIONER for these specialities, see that they are marked "KURRUWA," and, if you cannot obtain them, write direct to THE "KURRUWA" ASSOCIATION, 2 and 3, IDOL LANE, LONDON, E.C.

question was raised at the Worthing Licensing Sessions the other day, the chairman, Colonel Wisden, bluntly told the publicans that the object of the notice was, first, to defraud the public, and, secondly, to evade one of the best Acts of Parliament ever passed, namely, the Food and Drugs Act. A similar view has been taken by the magistrates of the borough of Truro and of the West Powder Division. In both cases some of the publicans seemed disposed to fight for the right to water; but on an intimation that if the notices continued the licences might not, they discreetly decided to take the notices down. So far the police of Cornwall have been successful in their crusade. We hope they will carry it into other parts of the county, and that similar action will be taken elsewhere. Whatever difference of opinion there may be as to the drinking of alcoholic spirits, there will be none as to the right of the purchaser to have the thing for which he pays. If there are publicans anxious to insist upon the right to sell watered spirits, we can only hope that magistrates will refuse to grant their licences. An appeal case based on the demand for liberty to defraud the public, to quote Colonel Wisden once more, would be interesting indeed."

It is a significant fact to be noted in connection with this fraud that it is one particularly favoured by the brewers who own "tied" houses. The "free" publicans favour it but little, and the most shameful revelations attending the swindle is that there are cases of publicans who have objected to carry on the fraud and exhibit the "notices," but these publicans have been threatened by the brewers owning their "tied" houses with eviction. In such cases the honest, self-respecting publican has to face a serious loss or comply with the will of the swindling brewer. At the present time it is, therefore, only action such as this at Worthing, Steyning, Truro, and West Powder which can protect publicans from being driven to become rogues. This is a pernicious effect of that disgraceful growing monopoly, the "tied house" system, which we hope soon to see engaging the attention of Parliament. The "tied house" enables the brewer to get rid of swipes, practice fraud at will, and degrade men to the level of common thieves, and as such it is indefensible in a liberty and honour-loving country like England.

A MAGISTRATE MAKES AN EXHIBITION OF HIMSELF.

AT Royton, on August 25, an important point was raised in connection with the operation of the Food and Drugs Act, and which gave rise to a strong protest by Mr. Alfred Butterworth against the ruling of the High Court. On February 10 last an aged milk dealer named Joseph Travis Whitehead, residing at Low Crompton, was summoned at the instance of Superintendent Heywood, who has since retired from the County Constabulary, for an offence under the Food and Drugs Act. It was then stated in evidence that a pint of new milk had been purchased from Whitehead by an officer acting under the instructions of Superintendent Heywood. This was bought for analysis, and a penny was charged for the milk. The analysis showed that one-third of the fat, or cream, had been abstracted from the milk. For the defence it was submitted that the milk seller sold the officer skimmed milk and charged him a penny for it. Messrs. A. Butterworth and James H. Lees-Milne, the Magistrates on the Bench at the time, took the defendant's version of the matter, told the prosecution that they could not reasonably expect a pint of new milk for one penny, and dismissed the case. Superintendent Heywood then gave notice of appeal against the Magistrates' decision. This appeal was fought out in London, with the result that the case was sent back to the Royton Magistrates for conviction. As previously stated, this was mentioned to the Magis-

trates on Wednesday, and Mr. Albert Slater, solicitor, of Hyde, who was present on behalf of the milk seller, was about to enter into the facts of the case when ex-Superintendent Heywood mentioned that the case had not been sent back for the purpose of re-hearing, but for the Magistrates to convict.—Mr. A. Butterworth immediately remarked that if the police brought a similar case before him to-morrow or at any other time he would act just on the same lines as he did in the case against Whitehead last February.—Mr. Harry Clegg (chairman) said he understood this was a case under the Food and Drugs Act. The magistrates on the Bench when the case was tried decided that they ought not to convict, and dismissed the case. Afterwards the case was sent up to the High Court, where it was ruled that the magistrates were wrong and ought to convict.—Ex-Superintendent Heywood: That is so.—At this stage Mr. Butterworth again rose, and somewhat warmly remarked that, although the chairman seemed anxious for him to talk the matter over in private, he (Mr. Butterworth) claimed the right to speak on this question. Turning to ex-Superintendent Heywood, Mr. Butterworth intimated that he disapproved of the action of the police in this case, and remarked that the case was a frivolous one, and never ought to have been brought before the magistrates in the first instance. The appeal had cost him £30, and he maintained that he was perfectly justified in making himself clearly understood in this matter.—Ex-Superintendent Heywood: In all due respect to Mr. Butterworth, I object to him taking exception to my action.—Mr. Butterworth again asserted that the case never ought to have been brought into court, it was so frivolous. Only a penny was paid for a pint of milk purchased for analysis, and he asked if the officer expected getting a pint of new milk for that price.—Ex-Superintendent Heywood: I object to these remarks.—Mr. Butterworth: And are we to convict in a case in which we in our judgment were opposed to making a penalty? If that is so, it is a gross injustice.—The Chairman said they had to conform to the decision of the High Court or give some reason for refusing to do so.—The Magistrates' Clerk (Mr. Lees), the Chairman, and Messrs. A. Butterworth and J. H. Lees-Milne chatted across the table, after which Mr. Butterworth said that as they were compelled to convict, he and Mr. Lees-Milne had agreed that the penalty should only be a nominal one, namely, 1s. including costs, and as he firmly believed that the old man was quite innocent of the charges preferred against him, he would pay the shilling himself. (Hear, hear, and laughter.)

ADULTERATION NOTICES COMPLAINED OF AND "TIED" HOUSES.

SUPERINTENDENT BEARE has informed the East Kerrier Bench that he had no objection to the renewal of any license in the division, the whole of the houses having been well conducted. There were thirty-two fully licensed houses and four beer-houses, the same number as last year. Only one publican had been proceeded against, the charge being for selling adulterated brandy. Eleven persons had been proceeded against for drunkenness, as compared with 17 last year. In last year's report he drew attention to notices in inns to the effect that only diluted spirits were sold on the premises, and that no alcoholic strength was guaranteed. At that time there were no less than twenty of these notices in the various public-houses, but since then the total had been reduced to nine. No tenant favoured such notices, and those who retained them only did so at the request of the brewers who owned the houses, and had intimated that refusal to comply with their wishes would mean dismissal. Of course, the houses referred to were those known as

"tied." He had mentioned the matter because he felt that houses in which this notice appeared ought not to be placed in the same category as those in which fair business was being transacted.

Colonel Pender, voicing the opinions of his colleagues on the Bench, fully concurred with the remarks of the Superintendent, and intimated that the justices disapproved of the notices.

Superintendent Beare: These notices are supplied to the tenants by the brewers.

INTERNATIONAL VEGETARIAN CONGRESS.

THE International Congress will be held in the Memorial Hall, Farringdon-street, E.C., from Sept. 13 to 18.

There will also be an exhibition connected with it of vegetarian foods, manufactures, etc. The congress and exhibition will be open to the public free of charge from 11 a.m. to 8 p.m., and those who are interested in food in its relation to health, and in its relation to humanity, will be very heartily welcome.

The executive will be pleased to receive further papers or exhibits of curios and unknown foods and food products.

I shall be very happy to forward tickets free of charge, and full particulars, to any of your readers.—Yours, etc.,

JOSIAH OLDFIELD, M.A., B.C.L.,

Secretary Vegetarian Federal Union.

16, Farringdon-street, E.C.

THE MUSTARD AND WHEAT FLOUR CAUSE.

AT the Tonbridge Police-court, on August 31, before H. A. Darbishire (chairman), J. F. W. Deacon, C. Fitch Kemp, H. J. Wood, and J. Stanford, Esqrs., Messrs. Arthur Creasy and Son, grocers, High-street, Tonbridge, were summoned for unlawfully selling mustard adulterated with 20 per cent. of wheaten flour, on July 20.—Mr. Louis Tillett, solicitor, of Norwich, appeared for the defendants.—I. C. Mount stated that on July 20, from instructions he received from Superintendent Bartlett, he went to the defendants' shop and purchased, amongst other articles, some mustard. He asked for $\frac{1}{2}$ -pound of pure mustard, and he was served with the tin of Colman's mustard produced by an assistant. He paid 9d. for it. After witness had asked for pure mustard, the assistant said, "Pure mustard?" and witness said, "Yes, please," and the assistant then gave him the tin produced. After witness had paid he said to the assistant, "These things are purchased for the purpose of being analysed by the public analyst," and the assistant replied, "All right." Witness then said, "Superintendent Bartlett will be here in a few minutes, when, if you like, he will divide this into three parts." Before Supt. Bartlett entered the shop the defendant picked up the tin and said, "This is sold as a condiment, as you see on the tin." Witness replied, "Yes, I see it says so on the tin, but I asked for pure mustard and have paid for it." Supt. Bartlett, defendant, and witness then went to a warehouse at the back of the shop, where they saw Mr. Arthur Creasy, and the tin of mustard was opened, and the contents were divided into three parts by Supt. Bartlett, one of which was handed to the defendants' assistant. While Supt. Bartlett was dividing the mustard, the assistant said, "I have made a mistake and given your man a condiment instead of pure mustard. Will you let me change it?" Supt. Bartlett answered, "No, I can't do that now. It is bought and paid for, and it must now go on in the usual course."—Cross-examined by Mr. Tillett: Witness had been in the police force about six years, and had not had much experience in adulteration cases.

Besides the mustard, he purchased at the defendant's $\frac{1}{2}$ lb. of coffee, $\frac{1}{2}$ lb. of arrowroot, half-a-gallon of flour, 1 lb. of butter, 1 $\frac{1}{2}$ lbs. of lard, and $\frac{1}{2}$ lb. of pepper. He would not be sure that he asked that all the things supplied him should be pure. He acted when he went into the shop under his superintendent's instructions, and precisely asked for pure mustard under Mr. Bartlett's orders. He had read a part of the Food and Drugs Act, but not the whole of it, and could not particularly recollect the 6th section. He admitted that the tin of mustard supplied him bore a label stating that the contents were a condiment. He paid for the mustard after he had purchased one more article, and he had an opportunity of looking at the wording on the tin before he paid for the mustard. It was not sold to his own prejudice.—Supt. Bartlett stated that on July 20 he instructed I.C. Mount to go to Messrs. Creasy's shop and purchase various articles, and about a quarter of an hour afterwards witness went into the shop and found I.C. Mount in possession of six or seven samples. Mr. Creasy and the assistant Collins were present, and witness said, "I suppose the officer has told you that these articles have been purchased for analysis?" and Collins replied "Yes," and afterwards added, "I have given your man condiment instead of mustard. Will you let me change it?" Witness said to I.C. Mount, "Had you paid for this before your attention was drawn to the label?" and Mount replied, "Oh, yes." Witness then told Collins that he could not allow him to change the mustard, and that if it turned out wrong he could give his explanation when the case came before the court. The mustard was then divided into three parts, and witness gave Mr. Creasy, jun., one part, kept one himself, and on the day following handed the third part to the public analyst, who sent the certificate produced, which was to the effect that the mustard was adulterated with 20 per cent. of wheat flour.—Mr. Tillett, for the defence, took objection to the analyst's certificate on three grounds, firstly, that Mr. Adams, the public analyst, had made an unwarrantable addition to his certificate by inserting the words "adulterated mustard"; secondly, he had omitted to give all the constituent parts of the article analysed; and thirdly, he had omitted to say that the article had not undergone a change in its composition. Mr. Adams, the learned solicitor held, had a right to state the constituent parts submitted to him, but he had no right to usurp the powers of the Bench and declare the sample to be adulterated. The public analyst had no right to prejudice a case, and the remarks he wished to make were restricted to the Statute which Mr. Tillett reminded the Bench was a penal one. Mustard contained many other things besides wheat flour, including oil, but the public analyst had omitted to state all the constituent parts, and by these omissions the certificate must, Mr. Tillett contended, by the decisions given in cases fought in the superior courts, fall to the ground. Mr. Tillett further submitted that Mr. Adams had vitiated his certificate, which, therefore, became invalid, and the prosecution must fail.—Supt. Bartlett said he would here ask that if the magistrates were with the learned solicitor on the points he had raised, the case should be adjourned in order that Mr. Adams might attend and give evidence.—Mr. Tillett replied that the worthy superintendent was wholly at sea with regard to the points he had raised, for Mr. Adams's attendance could not in any way alter the invalidity of the certificate.—The Bench now retired to consult, and after an absence of twenty minutes returned into court, when the Chairman stated that they had carefully considered the objections raised, and they were of opinion that the certificate produced was sufficient.—Mr. Tillett then proceeded to address the Bench on the merits of the case, and said he should call evidence to directly contradict the evidence of I.C. Mount. His contention was that pure mustard was not asked for by the

constable, but simply mustard, and there was no question that the mustard was sold in a tin bearing a notice in accordance with Section VIII. of the Food and Drugs Act. But assuming that pure mustard was asked, he (the solicitor) submitted that the purchaser in this instance was not prejudiced, and, therefore, no offence had been committed under the Act. The tin box bore a label denoting that the contents was a condiment, and therefore when the constable accepted it he was the willing recipient of an article which, according to the requirements of the Act, was of the nature, substance, and quality demanded. Mr. Tillett now proceeded to quote various authorities in support of his numerous contentions, after which he explained to the bench that Messrs. Colman manufactured three different kinds of mustard, which were known as fine, superfine, and double superfine, and these were put up in condiment and genuine qualities.—At this juncture of the learned solicitor's address the magistrates again consulted, and the Chairman in the end announced that the summons would be dismissed. — Mr. Tillett applied for costs, but the magistrates refused to entertain the application.—The case created a considerable interest amongst the grocers of the town, several of whom were present in court, and Messrs. Colman, the well-known manufacturers, of Norwich, were represented.

DANISH BUTTER.

THE Royal Danish Agricultural Society has issued a statement in reply to certain articles which have appeared in English newspapers on the subject of Danish butter. In this statement the society first calls attention to the recent report of the English Royal Commission, in which it is declared that cleanliness is enforced in Danish dairies by stringent regulations ensuring the delivery of sweet, pure milk, and preventing the spread of infectious diseases by dairy products. The society then refers to the Danish Infectious Diseases Act, containing stringent regulations, which are strictly enforced, against the sale of dairy produce from dairies and farms affected by infectious diseases. The Government regulations, the statement continues, orders wells and drains to be inspected and kept in a perfectly clean condition. The Government's dairy experts have during the last seven years made more than 2,100 visits to dairies and farms, and the result of their examinations of the water in all these cases was that only on 54 occasions did they raise any objections to the quality of the water, and even in these instances many of the faults complained of were very trivial, such as there being rather too much iron in it. In all such cases dairies are ordered to have the well complained of attended to immediately, and the authorities always see that the instructions given by them have been carried out. So say the Danes, but the statement is untrue. Taking, however, their own admissions, 54 dairies and farms out of 2,100 were defective, and the experts only inspected 300 per year. This inspection is nothing to our inspection in England, and the percentage insanitary throws grave suspicion upon the healthfulness of Danish butter. The apologists wisely say nothing about the 15 per cent. of margarine put into Danish butter.

SALICYLIC ACID IN FOOD.

It is well known to-day, says the *Sanitarian*, that salicylic acid is a powerful antiseptic. As such it retards the action of organised ferments like the yeast plant and putrefactive bacteria. Its action in unorganised ferments is even more powerful. It completely arrests the conversions of starch into grape sugar by disease and pancreatic extracts. This action is directly opposed to the process of digestion, and, were there no other reason, the use of salicylic acid should be universally condemned. These facts in connection with salicylic acid have been recognised very

thoroughly in legislation. The use of the acid has been condemned by most of the European countries having pure food laws. In France it is forbidden by law. In Austria, Italy and Spain it cannot be used without the danger of incurring a heavy penalty, and all South American States having pure food laws have absolutely forbidden its sale. The laws of many of the States forbid its use. By a decision of the dairy and food commission the use of salicylic acid in food is prohibited in Pennsylvania.

I wish to call attention here to another fact in connection with the use of salicylic acid which is of extreme importance, viz., the sale of preservatives, preservatives, etc., under various high-sounding names, intended for use in private families. A number of these, claimed to be perfectly harmless, are on the market, but actually contain salicylic acid as the main ingredient. The conscientious and careful house keeper should put an absolute veto upon the use of any such compound. There is rarely any need for them, since, when pure fruits and vegetables are used and proper directions for sterilizing by heat etc., are carried out, canned or preserved goods of all descriptions can be prepared that will remain in good condition for years without the aid of any preservative.

DISINFECTANT SOAP8.

By S. RIDGAL, D.Sc. LOND., F.I.C.

(Concluded. from page 430).

Arsenical soaps have come under prominent notice of late, owing to recent prosecutions, which showed that the amount of arsenic present was almost infinitesimal and quite insufficient for antiseptic or disinfectant properties, although the small quantity in constant use might have some effect on the skin.

The powerful antiseptic action of mercury salts suggested their employment in medicated soaps. It was difficult, however, to prevent the production of the insoluble mercuric oleate, which has little or no germicidal action, and also prevents the formation of a good lather, while any surfaces on which a mercurial preparation is used are liable to become blackened by H_2S , and organic matter is apt to reduce and throw the mercury out of action. One form of mercurial soap contains mercuric chloride, ammonio-mercuric chloride, together with naphthol, eucalyptol, and methyl salicylate. The salts are incorporated with a neutral soap in a dry state in the process of milling, and are therefore, possibly, present unchanged. It is claimed that they are active at the moment of decomposition, as in washing, though afterwards converted into oleate.

The double iodide of K and Hg has even stronger germicidal powers than $HgCl_2$. In certain proportions it is easily incorporated in the soap stock, and I have found that when dissolved in warm water there is no separation of any insoluble mercury compound. The strength recommended is 1 to 3 of HgI_2 , and 1 to 3 KI in 100 of soap. It is said to be effective in a proportion of 1 part of HgI_2 to 4000 of water. A soap of this kind which is in the market I have found by analysis of some samples to have the following composition in three grades sold:—

| Nominal strength. | KI. | HgI_2 . | Double iodide of mercury and potassium. |
|-------------------|------|-----------|---|
| 3 per cent. ... | 2.25 | 2.39 | 2.92 |
| 2 " ... | 0.94 | 0.63 | 0.77 |
| 1 " ... | 0.45 | 0.26 | 0.31 |

More potassium iodide is therefore present than is sufficient to form the double salt. Potassio-mercuric iodide has the advantage of being compatible with strong alkalis, as is shown in the preparation of Nessler test. Moreover, it does not precipitate albumin, and is not easily reduced. According to Dr. Sims Woodhead, cheaper "carbolate of mercury" soap is not so powerfully disinfectant, and is considerably slower in its action. Obviously mercurial soap should

not be used popularly or indiscriminately. We can conclude that with regard to metallic soaps, as it is known that a metal in the form of oleate is readily absorbed by the skin, if an internal effect is wished for an oleant soap will succeed; but if a local antiseptic or disinfectant action be required, oleates or other insoluble salts are practically useless, and means must be taken to obtain a mixture like the mercuric iodide soap, or the zinc soap mentioned above, which yields the metal in a soluble form to water. The latter use of soap is obviously the natural one, the former more properly belonging to an ointment or liniment.

Within the last few years I have investigated bacteriologically the relative antiseptic properties of a number of commercial and medicated soaps. In one series comparison was made with a curd soap containing 32.5 per cent. of water and 60.8 per cent. of fatty anhydrides, using for the experiments a 2 per cent. solution. Inoculation with active bouillon cultures gave results which may be summarised in the tables, and indicating growth and sterility.

I.—*Bacillus Coli Communis* in Vigorous Growth.

| Time. | Curd Soap. | Ascented curd soap. | Carbolic 10 p. c. | New disinfectants. A and B. | HgI ₂ , 3 p. c. | Formalin, 0.4 p. c. |
|----------|------------|---------------------|-------------------|-----------------------------|----------------------------|---------------------|
| 5 mins. | ... | ... | ... | ... | — | + |
| 15 " | ... | ... | ... | ... | — | + |
| 25 " | ... | ... | ... | ... | — | + |
| 30 " | + | + | + | + | — | — |
| 1 hour | + | + | + | + | — | — |
| 1½ " | + | + | + | + | ... | ... |
| 2½ hours | + | + | — | + | ... | ... |
| 3½ " | + | + | — | + | (Much attenuated) | ... |
| 4 " | — | — | — | — | — | — |

II.—*Staphylococcus Pyogenes Aureus*.

| Time. | Curd soap. | Scented curd. | Carbolic 10 p. c. | New disinfectants. A and B. | HgI ₂ , 3 p. c. | Formalin 0.4 p. c. |
|----------------------|------------|---------------|-------------------|-----------------------------|----------------------------|--------------------|
| 10 mins. | + | + | — | + | — | + |
| 20 " | + | + | — | + | — | + |
| 30 " | + | — | — | — | — | — |
| Between 1 and 4 hrs. | — | — | — | — | — | — |

These soaps were tried as sold. The relative amounts of disinfectants present in the solutions of the same strength (2 per cent.) would be:—

| | |
|------------------|---|
| Carbolic | ... 0.2 per cent., or 7 in 500 of phenol. |
| A | ... 0.06 " " 7 in 1,666 " |
| B | ... 0.03 " " 7 in 3,332 " |
| HgI ₂ | ... 0.06 " " 7 in 1,666 of HgI ₂ . |
| Formalin | ... 0.008 " " 7 in 12,500 of formaldehyde. |

It will be seen that in these experiments the formaldehyde was used in unduly small quantity, but the results are good.

CARBOLIC AND CRESYLIC SOAPS.—An ordinarily stated commercial strength of these soaps is 10 per cent., but it is frequently much less. The odour of all forms is very much pronounced, and often constitutes an objection. Several varieties are advertised as of "delicate odour," and "not unpleasant in any boudoir," etc. But, although the homologues of cresol have a higher disinfectant power than phenol, they will still, if in effective proportions, manifest their distinctive odour, so that a soap of the tar order, however disguised with eucalyptus, gaultheria, or other scents, which in themselves, by the way, have little disinfectant value, cannot be free from a more or less tarry odour. A large number of "toilet soaps" are advertised in conjunction with the names of various disinfectants, and they contain such an infinitesimal quantity of the various reagents as to be quite useless in a germicidal sense; they are, in fact, objectionable as conveying a feeling of a fallacious immunity.

ESSENTIAL OIL.—The disinfectant power of the essential oils has been much overrated, and to be at all effective they require to be used in such quantities as are liable to cause serious irritation to the skin, many of them having a blistering action as powerful as turpentine or mustard. When desired as perfumes, the

amount should be minute, an over-strength having caused many soaps, otherwise well manufactured, to lose favour. When such ingredients are added to the crutching pan, it is always desirable to neutralise the free alkali at this stage by the ammonium salt process, or to postpone the addition of the oils until after the operation of fitting. Such has been the reaction against perfumes, that prominent brands are advertised as "unscented" and others as "delicately scented."

Volatile disinfectants, such as phenol, camphor, thymol, etc., suffer considerable loss if introduced in crutching in the ordinary manner, or, if added during remelting, so that the quantity present becomes uncertain: it seems, in fact, desirable that all such medicinal soaps should be milled or plotted, as the machines are very convenient for regulating the amount of disinfectant added.

The cakes should evidently be packed in tinfoil (except in the case of mercury soaps, when oiled paper or thin gutta-percha should be used), and should be kept in a cool place. It has been proposed to coat the surface of the tablet with a film of gelatin or wax. In a series of experiments made in 1896 at 37 deg. C. using 2 per cent. solutions and broth cultures of two representative organisms with the usual precautions, I found that oil of cloves when present in a soap had little antiseptic action.

Time Required to Kill the Organism.

| Organism. | Curd Soap. | Carbolic soap, 3 lbs. per cwt. | Clove oil soap, 7½ lbs. per cwt. | Biniodide soap 0.5 per cent. | Biniodide soap 1.0 per cent. |
|-------------------------------|-------------------------------|--------------------------------|----------------------------------|------------------------------|------------------------------|
| <i>B. coli communis</i> ... | Between 2 and 4 hours. | Between 2 and 4 hours. | Alive after 6 hours. | Less than 15 minutes. | Less than 15 minutes. |
| <i>S. pyogenes aureus</i> ... | Organism alive after 6 hours. | | | | Between 15 and 20 mins. |

The carbolic and the two clove oil soaps have, therefore, an antiseptic action equal to, but not exceeding, ordinary curd soap. In the case of *S. pyogenes aureus* the limit of time required to produce disinfection was not reached, but, as both the strength and the time much exceeded those which obtain in practice, it was not considered necessary to prolong the experiments. The time had also much exceeded that required by the biniodide.

A comparison of the amount of antiseptic present in the case of the carbolic and mercurial soaps would point to the *a priori* probability of the above results, since the 2 per cent. solution of carbolic soap contained 0.052 per cent. phenol, and the 2 per cent. solution of mercurial soap contained 0.01 and 0.02 per cent. of mercuric iodide respectively; solutions of 1 in 10,000 and 7 in 5,000 of mercuric iodide are known to possess decided antiseptic properties, but a solution of 1 in 2,000 of carbolic acid is practically useless.

Another series of experiments at present in progress have shown the following preliminary results with *B. coli communis* and 2 per cent. solutions:—

Curd soap.—Sterile between 1 and 3 hours.

Zinc soap (made as described in the paper).—Alive after 3 hours.

Carbolic soap.—Sterile between ½ and 1 hour.

Coal-tar soap.—Ditto.

Sanitas soap.—Alive after 3 hours.

Terebene soap.—Ditto.

The variation in these results is influenced by the amount of water present, thus, taking a dry curd soap such as was used in the above experiments in proportion corresponding to soaps containing 33 per cent. and 66 per cent. of water, the following results were obtained:—

| Time required to kill | Attenuated after 1 hr. | 3 per cent. dry soap. | 3 per cent. of soap containing 33 per cent. water. | 3 per cent. of soap containing 66 per cent. of water. |
|-------------------------|------------------------|-----------------------|--|---|
| <i>B. coli communis</i> | | | Less than 3 hrs. | 3 hrs. |

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 " 451.—Tincture of Rhubarb.—Testing for Tuberculosis.—New Margarine Law in Germany.—Mustard.—Pepper.—Adulterated Sweet Nitre.—Olive Oil.
 " 452—More Exposure of the Water at Spirit Price Swindle.—Adulteration at Crayford.—Refusal to Sell Upheld.—Ptomaine Poisoning in Birmingham.
 " 453—Correspondence: Improvements in Sewage Treatment; How We are "Done" by Our Food Purveyors.
 " 454—Earth for Earth Closets.—A French Margarine Law.—Sanitary Crocks.

Food and Sanitation.

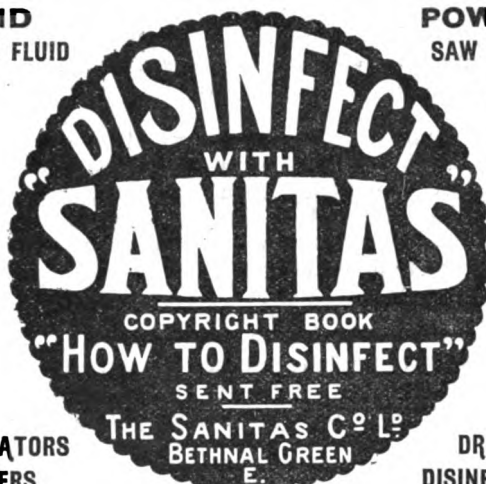
SATURDAY, SEPTEMBER 18TH, 1897.

CORONERSHIP PLUS IGNORANCE ON AMERICAN REFUSE OILS.

IF anything could bring contempt more than already exists upon some coroners and certain incapables who posture as tin panjandruns on brass wheels, it must be such impertinences as the summary imprisonment of a self-respecting Englishman the other day by a cad "dressed with a little brief authority," and the vagaries of Mr. Braxton-Hicks. "Personally," said Mr.

FLUID
 CRUDE FLUID
 OIL

POWDER
 SAW - DUST
 SOAPS



FUMIGATORS
 INHALERS

DRESSINGS
 DISINFECTORS

KINGZETTS (Patent) SULPHUR FUMIGATING CANDLES.

Braxton-Hicks the other day, "I know nothing about the flashing point of mineral oils, and, what is more, I do not want to."

This "curiosity amongst coroners" afterwards said that the whole of the 250 members of the Coroners' Society of England and Wales were with him on the subject, a statement which is either the grossest libel on the coroners of England, or convicts them of being corrupt hirelings of the Standard Oil Company gang of plotters and perpetrators of arson, dynamite explosions, and murder. The Standard garg's villainies even taint our House of Commons, as witness the actions of their Parliamentary hireling, the late Rt. Hon. Anthony Mundella.

This enemy of humanity held cabinet rank, posed as a friend of the poor, vapourised as an ex-Chartist, and was a paid hireling of the American refuse oil gang. His mission it was as chairman of the select committee to earn the wages of infamy by "burking" truth.

"*De mortuis nil nisi bonum*" is all very well, but when a life per day is sacrificed, the "*de mortuis nil nisi bonum*," to our thinking, ought to receive no support. Mr. Braxton-Hicks and his opinions remind us of nothing so much as the story of Henry Irving's horse. It is said the eminent actor bought it for a very small amount, and quietly inquired of the ostler why it was sold for so little, and if it had any faults. The ostler, just as quietly, answered that it had two. "You see, sir, he's hard to catch." "That's nothing," was the reply. "Well, the second fault is that when you catch him he's no d—d good." And such are the self-confessed ignorant opinions of American refuse oils postulated by the premier *poseur* amongst coroners.

Mr. Braxton-Hicks has chosen to suggest that the *Star* has financial reasons for exposing the 73 deg. flash-point murderous conspiracy. We believe that to be a silly lie, and we do not doubt that Mr. Braxton-Hicks well knows that it is so. We were the first journal in England to tell the truth plainly and fearlessly about the American oil scoundrels, their arsons, briberies, and murders, and we do not know personally one of the people engaged in the business, nor do we believe the *Star* does. It may be hard for persons like Mr. Braxton-Hicks to understand it, but it is a fact that there can yet be found in Great Britain writers who write for truth and the public well-being. They may not, perhaps, make as much money as "Crownors," but they do a great deal more good, and to give Mr. Bumptious Braxton-Hicks a little of his own vulgarity—"he may put that in his pipe and smoke it."

Some of those who did not know the late Mr. Mundella thoroughly may doubt his hireling character. Well, here is the American *Paint, Oil, and Drug Review* lamenting death's beneficent working in his case:—

"The Parliamentary committee appointed to inquire

into the desirability of raising the test has been dissolved until the next session. *The death of Mr. Mundella removed one of the advocates of a low flash-point*, and there is now a majority of one in favour of raising the test, but when the committee is reconstituted next session it will be proposed to enlarge its number, as there is an uneasy suspicion at Westminster that between the exertions of the Scottish Oil Company, which is for raising the test, and of the Standard Oil Company, which is for keeping it as it is, the committee has succumbed to undue influences."

Mr. Mundella was chairman of the committee, and posed as an impartial man, but here an American oil organ endorses the truth we long ago stated, and demonstrates how these American murderers' millions can even corrupt and disgrace our House of Commons.

TIBBLES' VI-COCOA INFRINGEMENT ACTION.

In an action by Dr. Tibbles' Vi-Cocoa Company, Limited, *v.* the Velcot Coco Company, Mr. Mark Knowles, on behalf of the defendants, on September 1st, asked Mr. Justice Byrne, sitting as the Vacation Judge, to direct that the plaintiff company should be required at once to tax the defendants' costs in an action against them for an alleged infringement of the plaintiffs' rights in cocoa. Mr Justice Kekewich dismissed the case just before the Vacation, the plaintiffs gave notice of appeal, but had since withdrawn it, and defendants were unable to get their costs because plaintiffs would not tax them. The ground for making the application urgent was that, on the plaintiffs' own showing, although their capital, so far as defendants could ascertain at Somerset House, was £4,000, which had been increased to £10,000, they were spending £1,200 a week in advertising, and nothing could presently be left if plaintiffs did not tax the defendants costs. — His Lordship said he had affidavits from directors of the plaintiff company that they had lodged with their solicitors more than sufficient to answer any costs that might be found against them. He, therefore, dismissed the motion with costs, which, however, could be set off against the costs now in question.

THE MANCHESTER SEWAGE QUESTION.

MR. WM. THOMSON writes:—"Up to the time of building the Ship Canal, the Manchester Sewage question had not assumed any acute form. The chief reason for treating the Manchester and Salford sewage is that, the water in the Ship Canal being stagnant, any suspended organic matter in the sewage is liable to deposit, become putrescent, and cause a nuisance, even if the water without the sediment did not emit an unpleasant smell. It is admittedly necessary to prevent this, and several schemes are proposed for doing so—First, to treat the whole of the sewage by precipitation, and pour the effluent into the canal. This has never yet been tried, as a large amount of untreated sewage is still allowed to enter the canal. If it be contemplated, as the least that can be done, to treat the sewage by precipitation, why should the experiment not be tried of doing this completely before going to any large expense to further treat the effluent from the precipitation process? Second, assuming the first to be undesirable, two methods are proposed to deal with this effluent; the one is to run it by a tunnel into the tidal water of the Mersey, and the other to treat it at enormous cost by artificial filtration.

"The cost of building a tunnel, on the one hand, or of erecting filters on the other, is, we are told, about the same. The former we know to be a solution of the problem; the latter may prove to be a fiasco, and

would certainly, after erection, be very costly to maintain. I fail to see why Manchester should not have the same rights as Warrington and Liverpool to pour the untreated sewage into the tidal waters of the Mersey by means of a tunnel. It is suggested that it would tend to silt up the estuary. I think this can be easily shown to be a delusion; if not, a good deal of silting up should be going on now, from the untreated sewage of Liverpool and Warrington, and it must be clear that anything which would flow for ten to fifteen miles down a sewer having such a gentle fall as that between Manchester and the tidal water would not silt up the estuary of the river, and it would be ridiculous to suppose that any such silting could take place from the effluent from precipitated sewage. I trust Manchester will claim the rights exercised by Warrington and Liverpool, to pour its untreated sewage into the tidal waters, and I think it should at least claim that right for the effluent from its precipitated sewage. The cost of a culvert for conveyance of the raw sewage, or the effluent, might be borne by Manchester and Salford together, with any of the townships higher up the stream which prefer to use the culvert, rather than spend money on the further purification of their effluents."

INCANDESCENT GAS: SYSTEMS FOR STREET LIGHTING.

THIS system of street lighting has been reported upon by the superintendent of street lighting of Liverpool, Mr. Bellamy. Up to a recent period the street lighting of Liverpool was exclusively by gas. In the leading thoroughfares electricity (provided by the corporation) has taken its place, but elsewhere gas is still relied upon, and in regard to this matter the superintendent reports upon the comparative results arising from the use of the ordinary flat flame burner and the incandescent burner. The report is carried into great detail, showing exceedingly close observation and calculation. The pilot lights or "by-pass" arrangement was first tried with the incandescent system, but was found unsatisfactory. The pilot lights were unreliable, a proportion of them becoming extinguished during the day, necessitating a special visit of the lamp-lighter with a ladder after completing the lighting of his district. Added to this was the deterioration of the mantle caused by the use of the "by-pass," whilst the cost of the maintenance of the pilot light in consumption of gas was assessed at 25 ft. per hour, amounting to an annual consumption of 1,428 cubic feet per burner, representing in cost 4s. 3d. per annum. This and other matters were regarded as unsatisfactory. The experiment was next tried of abolishing the pilot light and lighting the burner by means of a match and ladder. The report shows this system to have been both costly and inconvenient, whereupon the attention of the officials was directed towards lighting the lamps by means of a torch and pole in the same manner as ordinary street gas-lamps have been for many years lighted. Some special mechanical adaptations of the casing of the lamp were found necessary for this purpose, but these were provided. The system remains now in use, and it is possible to give comparisons which are very distinctive. They show that in brilliance of illumination the incandescent lamps are superior to the older type, that the consumption of gas is less, and that the total cost of street lighting is reduced. The conclusion, says the superintendent, is that a general extension of the system seems irresistible.

The absence of durability in the mantles and their very fragile nature are points which Liverpool and other places, extending or adapting incandescent gas lighting, will do well to carefully consider. There have already been produced in Germany incandescent mantles which we found will suffer much greater knocking about than

the mantles in common use in England, and which are nearly twice as durable, and cost about half the price. This item alone would lead to large economies in town lighting, and before adopting systems necessitating the sole use of any one form of mantle, local authorities would do well to try the improved and cheaper forms and compare them for power, durability and cost with the expensive ones whose use is hedged round with so many irritating restrictions.

THE SANITARY CONGRESS.

THE sixteenth congress of the Sanitary Institute is to be held at Leeds from the 14th to the 18th inst. A very large local committee has been formed, of which the Lord Mayor of Leeds (Sir James Kitson, M.P.) is the chairman, and the Town Hall, the Yorkshire College, and other buildings have been placed at the disposal of the congress for meetings. A considerable number of delegates, representing the War Office, County Councils, County Boroughs, Urban District Councils, Sanitary Authorities, School Boards, Universities, societies, and medical bodies have been selected to attend. No effort has been spared at Leeds to secure that the gathering shall be successful, and the Institute in London has been at work for some time. The Council, of which Sir Douglas Galton is chairman, has now almost completed the arrangements, and we are able to give an outline of the proceedings.

The president of the congress is Dr. Robert Farquharson, M.P., who will deliver his inaugural address in the Library of the Yorkshire College at 3 o'clock on Tuesday, September 14. The subject will be "Some Defects of Modern Civilisation, with Hints for the Improvement of the Human Race." An exhibition of sanitary appliances will be opened in the Camp-road Buildings in the evening of the same day. The second day will be occupied with a series of conferences, six in number. In every case the president will deliver an address, and papers will follow. The conference on river pollution will be presided over by Major Lamorock Flower, sanitary engineer to the Lea Conservancy Board. Amongst his recommendations will be found one in favour of the creation of a central inspector of sources of water supply. Papers on the general question, and on the purification of trade effluents, are also to be read. The conference of municipal representatives will be presided over by Mr. Councillor B. Womersley, chairman of the Leeds Sanitary Committee, whose address will be local and historical. Papers are promised dealing with the subjects of the Church and Sanitation, Working-Class Dwellings in Belfast, the Influence of Large Towns on the Sanitary Progress of Neighbouring Small Towns, and other matters. Medical officers of health also meet in conference under Dr. Edward Seaton, and there is a considerable list of papers, referring to Small Isolation Hospitals, Poisoning by Tinned Foods and its Prevention, etc. Dr. Sykes (St. Pancras) will contribute a paper on Artisans' Dwellings as affected by Customs and Inland Revenue Acts; and the Assistant Professor of Public Health at the University College, Mr. H. Kenwood, M.B., will detail some experiments showing that formic aldehyde vapours effectually disinfect rooms quickly and without affecting the colours and textures of fabrics. Mr. Thomas Hewson will preside over the conference of municipal and county engineers. Subjects for discussion comprise the Disadvantages and Dangers of Combined Drainage, Sanitary Aspects of Wood Pavement, Storm Water Drainage, etc. The sanitary inspectors will meet under Mr. Peter Fyfe, chief sanitary inspector of Glasgow, at the School Board Offices. The ladies' conference on Domestic Hygiene, under Mrs. Fawkes, with a list of vice-presidents headed by the Marchioness of Ripon,

will meet in the Methodist New Connexion hall. The subjects already fixed include:—Health in Infant Schools, Women as Hygiene Teachers, and the Milk Supply and some of its Dangers. The day's work will be followed by a conversazione and reception by the Lord Mayor in the Art Gallery in the evening.

The three sections will begin their work on the Thursday, and continue it on the Friday. Mr. Pridgin Teale will preside over and address the section on Sanitary Science and Preventive Medicine. The subjects for papers comprise:—Sanitation in Relation to Food Supply, Infant Mortality, Hygiene in Elementary Schools, Sewage in Estuaries, and the Amendments and Administration of the Vaccination Acts. The last-named paper will be by Dr. Francis T. Bond. Section II. deals with Engineering and Architecture. Its proceedings will be opened with an address from its president, Mr. Lewis Angell. The topics of the papers will include Sewage Filtration, Disposal, and Purification, Fever Hospitals, Baths and Washhouses. Section III.—Chemistry, Meteorology, and Geology—has for its president Mr. W. Whitaker, who is to offer suggestions about federation for water supply. On Thursday the lecture to the congress in the Albert-hall will be given by Mr. H. Percy Boulnois, city engineer of Liverpool, on some Sanitary Advances in Municipal Engineering. The congress will conclude with a lecture by Mr. Philip Boobbyer, medical officer of health, Nottingham, on the Essentials of Popular Hygiene. The Sanitary Exhibition will remain open until October 9.

CHEMICAL PRINCIPLES OF THE THEORY OF DISINFECTANTS.

DRS. B. KRONIG and M. Paul, working under the direction of Profs. P. Zweifel and W. Ostwald in the bacteriological and physico-chemical laboratories at Leipzig, have investigated the action of chemical re-agents on bacteria under all imaginable conditions, their report occupying 110 pages of the *Zeitsch. f. Hyg. und Inf. Krankh.* XXV. H. I., but it will be sufficient (says *Public Health*) to give the rules they lay down for the conduct of all experiments, and in a somewhat shortened form, the summary they append of their conclusions. The directions for avoiding fallacious inferences are:—

1. In all comparative observations it is imperative that *molecularly equivalent* quantities of the re-agents should be employed.
2. The bacteria serving as test objects should have equal powers of resistance.
3. The numbers of the bacteria used in comparative observations should be approximately equal.
4. The disinfecting solution must be always used at the same temperature in comparative experiments.
5. The bacteria must be brought into contact with the disinfectant with as little as possible of the nutrient material carried over.
6. After having been exposed to the disinfectant for a fixed time, they should be freed from it so far as possible.
7. They should then be returned in equal numbers to the respective culture media most favourable to the development of each, and kept at the same, preferably the optimum, temperature for their growth.
8. The number of surviving bacteria capable of giving rise to colonies in solid media must be estimated after the lapse of equal periods.

Their conclusions were that:—

The rules above laid down having been strictly observed—

1. The germicidal action of solutions of metallic salts depends not only on the concentration of the solution, but also on the specific properties of the salts themselves and of the solvents.

2. Solutions of metallic salts in which the metallic constituent is of a complex ion, and consequently the concentration low, are very feeble disinfectants.

3. The action of a metallic salt depends on the specific properties, not only of the metallion, but also of the anion, and of any other constituents associated therewith in combination.

4. In haloid compounds of metals, such as mercury (including Cyanogen), the action is proportioned to the degree of dissociation.

5. The germicidal action of aqueous solutions of mercuric chloride is *diminished* by the addition of halogen compounds of other metals and of hydrogen, as HCl; this diminution being probably due to a check put on electrolytic dissociation.

6. The germicidal action of the nitrate, sulphate, and acetate of mercury is appreciably *increased* by the addition of small quantities of sodium chloride.

7. Acids in general act in proportion to the degree of electrolytic dissociation, *i.e.*, to the concentration of the hydrogen ions in the solution. A specific toxic action attaches to the anions of hydrofluoric, nitric, and trichloric acids. This specific action diminishes with increasing dilution inversely as the toxic action of the hydrogen ions.

8. The bases K, Na, Li, NH₄, disinfect in proportion to the degree of their dissociation, *i.e.*, the concentration in the solution of the hydroxyl ions present. The hydrogen ions are in like manner stronger poisons than the hydroxyl ions in respect of anthrax spores, and in a still higher degree for the staphylococcus pyogenus aureus.

9. The germicidal action of the halogens, Cl, I, Br, declines with the other chemical properties depending on the greater atomic weight.

10. Oxidising agents as nitric, bichromic, chloric, bisulphuric, and permanganic acids act according to their place in the series based on their electric relations. Chlorine, however, is an exception, having a very powerful special action of its own.

11. The disinfecting action of several oxidisers is materially enhanced by the addition of a halogen, as of hydrochloric acid to potassium permanganate.

12. Many otherwise active germicides become almost inert when dissolved in absolute methyl or ethyl alcohols or (ethylic) ether, at least as regards anthrax spores.

13. The disinfecting action of watery solutions of silver nitrate or mercuric chloride is considerably increased by the addition of definite quantities of methyl or ethyl alcohols or acetones.

14. But that of aqueous solutions of phenol and of formic aldehyd is reduced by their addition.

15. The action of metallic salts is generally much less in bouillon, gelatine, and other animal fluids; and in dilutions of these is usually less than in pure watery solutions, owing probably to the lessened concentration of the metallions.

16. There is no direct or constant relation between the germicidal action of a reagent and its power of inhibiting the growth of the microbes.

17. It is probable that in checking their growth the degree of electrical dissociation of the metallic salt plays a lesser part, the efficient cause being the concentration of the metal in the culture fluid.

18. Certain general laws exist as to the relation between the concentration and the toxicity of solution of mercuric chloride, and probably also as regards other salts.

19. The poisonous action of metallic salts on living plants stands in a certain relation to the degree of electrical dissociation.

RASPBERRY JAM.

At Rochester, on September 2, Ann Goodhew, Shaftesbury-road, New Brompton, was summoned for

selling adulterated raspberry jam. Mr. Hearn defended, and submitted that under the Act it was provided that a summons for perishable goods should be served within 28 days. He contended that jam, when exposed to the air, was perishable. The goods were bought on July 19, and the summons was not issued till August 17, which was 29 days. The bench decided that jam was not a perishable article, within the meaning of the Act. Constable Andrews proved having purchased the jam for 5½d. Superintendent Lacy produced the analyst's certificate, which showed that only 50 per cent. was raspberry, the other half being composed of foreign vegetable matter. Mr. Hearn said his client was ignorant of the fact that the jam was adulterated. Fined 5s., and 10s. costs.

COFFEE AND CHICORY: A TEST CASE.

JABEZ JENNINGS, grocer, Toddington, was summoned, on August 27, for selling coffee and chicory which was not of the nature, quality, and substance demanded. Defendant pleaded "Not guilty." Inspector Mason visited defendant's shop and purchased half a pound of coffee and chicory, for which he paid 6d. He could not say whether he asked for "chicory and coffee" or "coffee and chicory." The public analyst, Dr. Stevenson, had certified that the sample consisted of 85 per cent. of chicory and 15 per cent. of coffee. Witness complained that there was too much chicory in the mixture, and added that the best coffee could be purchased retail at 1s. 8d. per lb., while chicory cost 6d. a pound. On these figures he alleged that he had been defrauded at the rate of 4d. in the shilling. He preferred the charge practically as a test case. The Bench inspected the tin in which the mixture was sold, and this bore a label on which appeared the words "Finest coffee as used in Paris: A mixture of chicory and coffee." The Bench dismissed the summons, but consented to state a case.

YEAST ADULTERATION.

WHEN we first, a few years ago, directed attention to the prevalence of yeast adulteration, cases were brought before magistrates with success in some instances, but the inexplicable decision of Mr. Justice Hawkins that baking powder was not an article of food gave yeast adulteration a free hand, for it was held that if the High Court did not regard baking powder as an article of food, because it was not eaten as such, it was unlikely that yeast would be regarded as an article of food, inasmuch as it served precisely the same purpose as baking powder, and is not eaten as a food. These considerations naturally deterred Food and Drugs Act Inspectors from prosecuting, however well they may have known of the prevalence of the fraud. Lately, however, there have been prosecutions.

In one case, at Howden Petty Sessions, George Jipson, of Eastrington, was charged under the Food and Drugs Act, 1875, with selling a certain article which was not of the quality demanded by the purchaser.—Defendant said that when he bought the yeast he expected it was all right.—Supt. Jackson deposed that on Monday, the 9th ult., he visited the defendant's shop at Eastrington, and asked for one pound of German yeast, which was supplied to him. He served a notice upon the defendant that it was for analysis, and divided the sample into three parts, leaving one with the defendant. He forwarded a sample to Mr. Baynes, the county analyst, and his certificate, which was put in, showed that the sample contained 40 per cent. of farina.—Defendant, in reply to the Bench, said that he bought the yeast, and expected that it was all right. They had had it before for their shop, and it had been

all right, and he supposed it was all right yet.—The Chairman, in giving the decision of the Bench on the matter, said that they could not overlook the fact that the sample was grossly adulterated—nearly half it being adulterated—and they would inflict a penalty of £3, to include costs. For defendant's own protection he must, in buying his stuffs, get a guarantee, or be so satisfied with the people with whom he dealt that he did not run any risk in the sale of the goods.

Yeast adulteration ought to be stopped, but if any convicted person, backed by manufacturers of the fraudulent article choose to appeal, the probabilities are that in the present chaotic state of the law the conviction would be quashed, and in the face of the baking powder decision we do not see how the courts could decide to affirm a conviction. We trust ere long a really comprehensive Food and Drugs Act will remove stupidities like this case, which tie the hands of inspectors and encourage foreign free fraud.

TINGTURE OF RHUBARB.

At Heanor, Samuel Bircumshaw, grocer, residing at Ray-street, Heanor, was summoned by Captain Sandys, Inspector of Weights and Measures, for selling 6 oz. of tincture of rhubarb 50 per cent. below proof spirit, and 30 per cent. or one-third of solid matter. Mr. J. White, county analyst, corroborated. Defendant, in defence, denied any intention of deception. He was perfectly ignorant of the contents, and was fined 10s. 6d., and £1 1s. costs.

TESTING FOR TUBERCULOSIS.

At a meeting of the Health Committee of the Glasgow Town Council this week, Bailie Dick called special attention to the report of the veterinary surgeon, in which it was set forth that a dairyman of the city had requested the vet. to test the cows in his herd to make sure that none were touched with tuberculosis. The result of the test was not very satisfactory, we are told, as some of the animals were affected. Bailie Dick's view of this very serious disclosure was peculiar, says the *Meat Trade Journal*. He saw in it matter for congratulation that the city had a veterinary surgeon capable of administering the tuberculin test, and he hoped that other dairymen would follow the example. If this is the worthy gentleman's desire, he has gone the wrong way about to secure it. Before the cow-keepers of Glasgow or anywhere else are going to "do likewise" they must be assured that their stock, if found diseased and slaughtered, will be paid for. There may be among them those who will voluntarily submit their animals to the test, but we doubt it. This, however, is not exactly our business, and what we want to know is the subsequent life and death history of the animals that were tested and found diseased. What became of them? Were they (as in the Dundee case) fed up and sold to the butcher? or were they buried in quicklime and destroyed completely? Or, were they quietly taken to a country market and sold to some other dairymen, with the possibility of ultimately finding their way into the hands of a butcher and being "seized"? These are the questions that naturally rise to our mind, and when we recall the experiences of Glasgow fleshers with tuberculosis seizures, we feel that they also will be anxious to know more about the cases to which Bailie Dick referred in such congratulatory terms. The whole question of tuberculosis appears in a new light now, and we have no doubt the Royal Commission will be glad to have a copy of the report from the veterinary surgeon of the Glasgow Corporation as submitted to the Health Committee. It is much too valuable a document to be relegated to the secrecy of the minute book of the city.

NEW MARGARINE LAW IN GERMANY.

THE Bill that recently passed the Reichstag and became law, left to the Bundesrath the task of settling the form or method to be employed to render margarine distinguishable from butter when used for trade purposes. The "Diet" has decreed (says *The Grocer*), that in order to facilitate its recognition in trade, "sesamol" ("Sesamum orientale") is to be added to it in the preparation of all fats and oils. "Sesamol" is the bland oil obtained from the seeds of "Sesamum orientale," a herb native to the East Indies, but cultivated in various warm countries. To 100 parts of the used fats or oils the addition to margarine must be 10 parts of "sesamol," and to margarine cheeses at least 5 parts. For the casks or coverings in which margarine, its cheeses, etc., are to be sold, models are supplied giving the dimensions and position of the lettering, red bands, etc. The name or firm of makers, as also the maker's mark, are to be placed close to the lettering without going over the red bands. The lettering and maker's mark are to be burned or painted on. If done in the latter way they are to be painted in black letters on a white or light yellow ground. The lettering and marks are to appear twice, at opposite ends or sides of the barrels or coverings. Certain clauses of the Bill come into force on October 1 next.

MUSTARD.

FRANK W. INGLEY, grocer, Shellington, was summoned for selling mustard not of the nature, substance and quality demanded. Inspector George Mason proved the purchase of a quarter of a pound of mustard at defendant's shop, and Sergeant Mason produced the analyst's certificate, which stated that the sample contained 10 per cent. of flour. Defendant pleaded that he sold the mustard in the same condition as he received it from the wholesale house. A fine of 5s. and costs was imposed.

PEPPER.

SHERIFF BALFOUR, at Glasgow, recently, fined John Sutherland, 15, Canning-street, £1 and £1 12s. 10d. for expenses for selling white pepper containing 15 per cent. of extraneous starch.

ADULTERATED SWEET NITRE.

At the Bingham Petty Sessions, on September 9, before Mr. T. B. T. Hildyard and Mr. C. H. Hill, William Case, grocer, East Bridgford, was summoned for selling adulterated sweet nitre.—Colonel Story, Inspector of Weights and Measures, proved the case, and produced the analyst's report, which showed that there were 58 parts of sweet nitre and 42 parts of added water.—Defendant said he sold the sweet nitre in the same condition as he received it.—Fined £3.

OLIVE OIL.

At North London, on September 9, Ebenyar Tickner, a grocer, of Newington-green, N., was summoned, before Mr. d'Eyncourt, at the instance of the Islington Vestry, for selling a certain drug—to wit, olive oil, which contained 100 per cent. of cotton-seed oil.—Mr. Bramall prosecuted; Mr. Hutton, barrister, defended.—The defence raised was that olive oil was not a drug within the meaning of the Act.—Dr. Harris, the medical officer for Islington, said that olive oil was a drug, and so described in the British Pharmacopœia. It could be

used as an article of food also.—Mr. Hutton inquired how olive oil was used as a drug, and the doctor replied that it was used as a gentle laxative for infants.—Mr. Hutton suggested that stewed rhubarb and prunes were drugs in the same way, but the witness said they were not because they were not in the Pharmacopœia. A fig was a drug because it was in the Pharmacopœia.—Mr. d'Eyncourt: A fig is a food also. So is olive oil. People do not go to grocers' shops to buy drugs.—The summons was dismissed with a guinea costs.—A summons against the defendant under another section of the Act for selling the oil as an article of food not of the nature, substance, and quality demanded, was applied for, but Mr. d'Eyncourt said that application must be made in the usual course.

MORE EXPOSURE OF THE WATER AT SPIRIT PRICE SWINDLE.

In his report at the Tregoney Sessions, Superintendent J. Basset said all the dilution notices in the division, as well as at Truro and St. Colomb, had been taken down, and no trouble experienced in respect of them.—The Chairman (Mr. J. Gwennap Moore) believed that Mr. Justice Mathew had decided that if the dilution notices were placed in every room where liquor was sold there was nothing illegal.—Superintendent Basset said he did not think it was stated that the cards were illegal.—The Chairman said it seemed to him that if spirit were adulterated with pure water it would be rather an advantage than otherwise.—Superintendent Basset said he gave the inn-keepers notice that he should object to the renewal of the licences if the notices were not removed.—The Chairman supposed that the Superintendent had not done so because of the illegality of the notices.—Superintendent Basset replied that his object was to give the magistrates the opportunity of withholding the licences if they thought fit. He did not see the necessity for the dilution notices if the inn-keepers did a genuine trade.

ADULTERATION AT CRAYFORD.

At Dartford Petty Sessions, Henry Pettit, grocer, of London-road, Crayford, was summoned for selling white pepper, butter, and ground ginger which was not of the nature and substance demand, on July 28.

Mr. Chancellor defended.

Inspector Quinlan said that he bought the articles mentioned, and divided them into three parts. He produced the analyst's certificate, which stated that the pepper was 50 parts pepper and 50 parts rice starch; butter, 20 parts butter and 80 parts foreign fat; and the ground ginger, 25 parts ginger and 75 parts rice starch.

Cross-examined by Mr. Chancellor: The defendant's wife, who supplied him with the articles, did not say the butter was a mixture when it was sold to him.

John Morgan, assistant to the last witness, corroborated.

Mr. Chancellor said that with regard to the butter he contended that Mrs. Pettit told the Inspector before the purchase was made that it was a mixture, and with regard to the white pepper he should rely upon the Act, which stated that if he could show that the articles were bought with a written warranty that they were pure, then that case against his client must be dismissed.

The warranty which Mr. Chancellor produced the Justices did not hold as a written warranty.

Mrs. Pettit said that when the Inspector came for the articles she told him that the butter was a mixture. She also told him that she could not guarantee that the pepper and ginger were pure, although they were bought as being pure.

Mary Ann Russell, wife of John Russell, of 4, London-road, Crayford, heard Mrs. Pettit inform the Inspector that she was not selling the articles as pure.

Mr. Chancellor asked to be allowed to put in the warranty to show how the small grocers were misled by the wholesale grocers.

Chairman (Mr. Elgood): Yes, these people—Messrs. Lancy, Urban, and Co.—ought to be prosecuted.

A fine of 10s. and the costs in each case was imposed.

SARAH FRICKER was summoned for, on July 28, selling butter which was not of the nature and substance demanded.

Inspector Quinlan said that he visited the shop, and purchased some butter and Demerara sugar. He produced the analyst's certificate, and this stated that the butter was 50 parts foreign fat. The Demerara sugar was genuine.

The defendant said that she bought the article as pure butter.

The Bench inflicted a fine of 10s. and costs.

REFUSAL TO SELL UPHELD.

At the Barnard Castle Police Court, on September 8, Mr. John Highmoor, farmer, of West Wood, Bowes-road, was charged, under the Food and Drugs Act, with refusing to sell one pint of milk to Mr. A. Thompson, an inspector under the Durham County Council. The complainant said this was the first case of its kind in the county of Durham, and he asked for a substantial penalty. On the evening of August 12 the defendant's servant was driving a milk cart past the King's Head Hotel, at Barnard Castle, and a man held up his hand, and the vehicle was stopped. Mr. Thompson immediately came out of the Red Lion Inn, disclosed his identity, and asked for a pint of milk, which was refused, as the whole of the supplies in the cart were being delivered under contract.—Mr. J. I. Dawson, defending, said this was a criminal proceeding, and, as a master was not responsible for the acts of his servants, the wrong man had been summoned. But he would meet the case on its merits. There was no evidence to show that this milk was exposed for sale in a public place. There were no measures and no sale, and the man very properly refused to sell any milk in course of wholesale delivery.—The defendant was called, and said he sold no milk by retail.—William Atkinson, his servant, swore that he told the inspector that he was not retailing the milk, and that, if he wanted a pint, he must get it at the place where the milk was delivered.—The Bench said there was no case, and allowed 13s. 6d. to Mr. Highmoor.

PTOMAIN POISONING IN BIRMINGHAM.

UNSOUND TINNED LOBSTER.

An inquest was held on September 10 by Mr. I. Bradley, coroner, at the Victoria Courts, respecting the death of Thomas Roberts-Thomas (40), 11, Brookfield-terrace, Brookfield-road, solicitor's managing clerk. Mr. Cochrane watched the case on behalf of the relatives.—Mrs. Roberts-Thomas stated that on the evening of August 21 deceased brought a small tin of lobster home and ate nearly the whole of it for supper. He stated that he had purchased the lobster at the shop of Mr. George, Crabtree-road, and, upon witness remarking that the fish looked dark in colour, deceased replied that the manager would not let him have the best brand because it was "not quite the thing." Deceased continued to attend to his duties for several days in the following week, but complained of rheumatism, and sought the advice of the club doctor, who said that he

was suffering from rheumatic gout. On Friday, the 27th ult., deceased came home in a cab, and, seeming very ill, went to bed. Mr. Newton, surgeon, was called in, and continued to attend deceased up to the time of his death on Wednesday last.—Laura Satchwell, a sister of the last witness, said that she ate part of the tin of lobster, and a few days later she felt very ill. Her head was bad and she seemed benumbed, in addition to sickness. She had, however, recovered. — William Eaton, manager of the grocer's shop, deposed to selling some tinned lobster to deceased. Witness remembered having a conversation with deceased about the lobster. Witness opened a tin of the best brand, but as it did not appear right he advised deceased to have another tin. This was opened, and seemed satisfactory to witness.—The Coroner: What was the difference in the brands?—Witness: They were both the same; the only difference was in the shape of the tin and the packing.—Have you had any other complaint of lobster you have sold? Not the slightest.—Would the tins be left open in the shop? No. Continuing, witness said that the conversation he had respecting the lobster was on the Saturday following July 21. The lobster he had referred to as being unsatisfactory was returned on August 5 to the consignors, Messrs. John Nixon and Co., of Liverpool.—The Coroner: What was the name of the brand? Witness: The Lorne.—By the Jury: There was nothing offensive about the smell of the fish, but it was discoloured, and that was the reason witness sent it back.—Mr. R. A. Newton, surgeon, Newhall-street, said that he attended deceased from August 29. At that time he thought he was suffering from rheumatism. On the following day a rash appeared, and deceased was attacked with vomiting. Witness then came to the conclusion that he was suffering from septic poison, and from the history he received of his diet for several days, he concluded that the case was one of ptomaine poisoning caused by eating tinned lobster. The symptoms became worse, and the extravasation on the skin became very marked. Deceased fell into a state of collapse and died on Wednesday. The post-mortem examination confirmed witness in his conclusion that death was due to ptomaine poisoning. He had no hesitation in saying it was due to eating tinned lobster in a more or less decomposed state.—The Coroner said that the case was a very sad one. He knew deceased personally, and knew that he had been actively associated with many popular movements in West Birmingham.—The jury returned a verdict to the effect that deceased died from ptomaine poisoning, brought about by eating tinned lobster. The jury desired to express their sympathy with Mrs. Roberts-Thomas, and in that sentiment the Coroner said he fully joined.

CORRESPONDENCE.

IMPROVEMENTS IN SEWAGE TREATMENT.

To the Editor of FOOD AND SANITATION.

SIR,—During the past three months there has been upon trial a system for the treatment of sewage at Hendon which, if it maintains the high standard of purification as proved by analysis, it is far in advance of any other system; and from what can be gathered from the few data yet published it is simple and inexpensive. It is the invention of Colonel Ducat, and so far as I have been able to learn it has only been noticed and commented upon by one organ of the public press—the *Manchester Guardian*, of July 26.

Knowing the independent line you have always taken in all matters of sanitation, it would be a source of

satisfaction to the general public to have your unbiassed opinion of its value.—I am, yours obediently,

W. T. PARKER DOUGLAS.

Ivy House, Newbury.

[This system will be reported on shortly.—Ed.]

HOW WE ARE "DONE" BY OUR FOOD PURVEYORS.

To the Editor of FOOD AND SANITATION.

SIR,—We are "careful and troubled about many things" as a people, a diminishing few about their souls, here and there one about political matters, but a vast number about their respective pot-boilings. The truth is forcing itself on the British housekeeper that the smiling purveyor of kitchen necessities is a sad fraud. The weekly bill handed up to us on Monday morning by the cook reveals charges a hundred per cent. in advance of the producer's prices. In running through a file of New Zealand papers this morning I find that about a fourth of the British meat supply comes from New Zealand. At least, I should suppose so, seeing that the quantity sent us from that flourishing colony between April 30, 1896, and April 30 of this year totals up as follows:—Mutton, 84,050,551 lbs.; lamb, 38,665,210 lbs.; beef, 3,318,639 lbs.; total, 125,934,400 lbs. Turning over a few pages of the colonial newspaper, I get the price received by the New Zealand farmer for this immense meat supply. I know from my butcher's bill what I pay for it. In my innocence I had supposed that I was reaping the full advantage of the frozen meat enterprise—having long ago proved that a shoulder of New Zealand lamb was equal to anything of the kind I had ever had on my table. The 8d. per lb. I had imagined cheap. But I learn that this delicious morsel passes from the producer's hands at 3½d. per lb. As I learn that about 1d. per lb. covers the various costs of the frozen meat *en route*, the unpleasant truth confronts me that I am paying to someone 100 per cent. in advance of the net cost of my food.

Pushing my inquiries, I find just the same facts in reference to a lot of other items of home produce. Tomatoes, for instance, net the producer, according to a large grower's bitter complaints in one of the daily papers this morning, about 3d. per lb. for the best fruit grown under glass. I have been paying 8d., and fool-like, blessed my luck in getting the luxury so cheap. So is it all down the list. Now, sir, is there no redemption from this wholesale swindling? All the world over, the toiling, care-worn producer is slowly ruining himself to provide us with cheap food, and the irony of the situation is that he is sacrificing himself, not to benefit the myriad consumers, but to enrich a few thousands of smart middlemen. I see that Mr. Hookey is contemplating some great distributing scheme, and if he is able to fulfil his promise of securing the producer 1d. per lb. more, while saving the consumer another penny, we must all wish him more power to his elbow. The question is really an Imperial one. Canada is about to furnish our tables with a fresh supply of delicious fruit, but there is no doubt that someone else than the Hamilton orchard owner will take the profit, and we shall whistle in vain for cheaper dessert. My colonial relatives groan under their disabilities, toiling and mowing the year in and the year out, only to get yearly nearer destruction. Lord Winchelsea has gallantly come to the rescue of the home producer, but it is a moot question whether any permanent redemption will accrue to his clients through his efforts. Would not a good threshing out of the question in your columns do some good.—Yours faithfully,

ARTHUR CLAYDEN.

Royal Colonial Institute, Sept. 10.

EARTH FOR EARTH CLOSETS.

WITH the increasing favour towards the earth closet for farm and other country houses and cottages, we have remarked a disposition to substitute ashes for earth or peat, thus getting rid of two kinds of refuse at one time, while the sifting avoids the waste of unburnt fuel. But however breezes and ashes may deodorise the excreta, or at any rate conceal their smell, they are wholly devoid of the power of nitrifying organic matter and reducing it to the inorganic state in which only is it available as food for plants. Still the ash closet, though not so inoffensive as the earth, has much to recommend it, especially in small households where the work devolves on the family or female servants; and there are few facilities for the preparation and storage of suitable earth, while the manure, though in a cruder state, is not less valuable as a fertiliser, and in stiff soils even more useful. But this nitrification by means of the bacteria of the soil applies to dead organic matter only, and in no way affects the question of the possible danger arising from the retention in the earth of the bacilli of enteric fever and other pathogenic microbes. Little is at present known of the extra-corporeal life of the so-called facultative parasites, and there are good grounds for suspecting that even under unfavourable conditions they do not, when turned adrift, perish so soon as commonly assumed. Dr. Sinnhuher, in his inaugural thesis at Königsberg, describes some researches carried out by him under the direction of Professor E. von Esmarch, in which he found that in pulverised garden soil, kept in a moderately moist state, cholera and enteric bacilli retained their vitality for several months, perhaps for indefinite periods, but that they were speedily destroyed by the addition of small proportions of quicklime thoroughly incorporated with the earth. With 4 per cent. they perished in four hours, with 6 per cent. in less than an hour, and with 8 per cent. within fifteen minutes. If kept fairly dry the mixture lost its activity very slowly, not, in fact, until the lapse of many weeks or months, while it was fully as efficient a deodoriser as the pure earth. He therefore recommends as the best material for earth closets a mixture of 10 per cent. of quicklime with dry garden mould, stored under cover from the rain and well worked together, as calculated to act as a disinfectant or germicide as well as to render excreta inoffensive to the smell without any deterioration of its value as a manure.—*Brit. Med. Jour.*

A FRENCH MARGARINE LAW.

THE French *Journal Officiel* of April 17 last contains the text of the new law concerning the repression of fraud in the butter trade and in the manufacture of margarine. The chief points of this law are given as follows in the *Journal of the Board of Agriculture*:—It is forbidden to designate, sell, expose for sale, import, or export, under the name of butter (with or without qualifying words), any substance not made exclusively from milk or cream, with or without salt or colouring matter. All alimentary substances other than butter, which present the appearance of butter, and are prepared for the same purpose, can only be described as margarine, whatever their origin, source, and composition. Under no circumstances may colouring matter be added to margarine as thus defined. Manufacturers, warehouse keepers, merchants, and retailers of butter are forbidden to manufacture, or to retain upon their premises or elsewhere margarine, or oleo-margarine, or to allow other persons to manufacture or store it on premises occupied by them. Margarine and oleo-margarine can only be brought on to the markets at places specially designated by the municipal authorities. The quantity of butter contained in margarine for sale (whether by churning milk or cream with oleo-margarine or by subsequent addition) must not exceed

10 per cent. Persons desirous of carrying on the manufacture of margarine must notify the local authorities. Margarine factories, warehouses, and shops must bear a notice with the words margarine (or oleo-margarine) factory (or warehouse or shop) in letters at least one foot high. Margarine factories are subjected to the supervision of inspectors, appointed by the Government, but paid by the establishments at a salary to be fixed by the Council of State. These inspectors are required to supervise the entry and quality of the materials, the manufacture, and the despatch of the margarine. They are to see that all regulations prescribed by Government regarding sanitary matters are strictly observed, and they can prohibit the use of unsound materials or of such as are injurious to health. They can at all times enter any part of the premises. All packages, boxes, cases, etc., containing margarine must bear the word "margarine" or "oleo-margarine" in clear and indelible type. The constituent parts of the margarine must be shown on labels and in the invoices. In the wholesale business the packages must also show clearly the name and address of the manufacturer. When the margarine is intended for export, the manufacturer is authorised to substitute the trade mark of the purchaser for his own, conditionally upon this mark bearing the word margarine in clear and indelible characters.

In the retail trade, margarine or oleo-margarine must be delivered in cubes with the word margarine (or oleo-margarine) impressed upon one face, and put into a wrapper also bearing the same designation with the name and address of the seller. If these cubes are retailed, the goods must be delivered in a wrapper with the said inscription. This regulation applies also to margarine or oleo-margarine imported, exported, or sent away. It is forbidden to sell margarine or oleo-margarine except in such wrappers with the above-mentioned descriptions; and in all bills, invoices, railway receipts, etc., the goods must be distinctly described as margarine or oleo-margarine. Failure to comply with these regulations will be held to indicate that the goods are butter. The inspectors mentioned above (or other special experts appointed by the Government) have the right to enter premises where butter is made for sale, customs stations, ports, and railway stations, to take samples of the manufactured goods prepared as butter, and to transmit such samples to laboratories designated by ministerial decision. Such samples (as well as the expenses of the examination) will be paid for by the State, unless fraud is proved against the proprietor. Persons knowingly infringing the provisions of the present law are liable to imprisonment for a period of from six days to three months, and to a fine of from £4 to £200. Inability to furnish the name of the seller or consignor will not be admitted as an excuse for infraction of the law. Carriers or transport companies are liable to a fine of from £2 to £20 for carrying margarine in packages not properly labelled. The use of unsound materials or of substances injurious to health will be dealt with under the penal code. A second offence within a year after conviction will always be punished by the maximum fine.

SANITARY CROCKS.

WHILE the expenditure of the Cardiff Health and Port Sanitary Committee was under review by the General Purposes Committee, on Sept. 13, Councillor S. Robinson declared that Mr. Woosey, superintendent of the sanitary department, was continually being applied to by members of the Corporation to put on as scavengers, etc., men who were old and worn out. This assertion of Mr. Robinson's was amply confirmed by Alderman Jacobs (chairman of the Health Committee), who said: "There is scarcely a member of this Corporation who is not constantly writing to Mr. Woosey asking him to employ old and decrepid men who are quite useless and unfit for the work."

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Food & Sanitation

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Food and Sanitation.

SATURDAY, SEPTEMBER 25TH, 1897.

SANITARY WASTE.

THE Sanitary Institute's annual picnic has come, and practically gone, but beyond the ordinary mutual admirations it has done nothing of *real* value, so far as any thinking person can discover. Last week, for example, something like one hundred places in the United Kingdom were in trouble about sanitary matters.

To take an instance, the Wigston Urban District Council had samples of water from houses on the Granville-road, Wigston Fields, analysed, and the

waters were certified to be unsafe for drinking purposes by the medical officer. Instructions were given to the inspector to take the necessary steps to close both the wells and have a proper supply of wholesome water provided.

Some of the Wigston sanitarians who ordered the closing of these wells may have "picniced" at sanitary congresses, but if they have not, there are scores of other *well-closers* who have, and who do equally insanitary things.

We wonder if the Wigston *well-closers* have given a moment's real consideration to the question of

WHAT IS PURE WATER?

They had the waters analysed and certified as unfit for drinking, so they say, but we have shown scores of times during the past few years that one lot of eminent analysts swear that London water is virginesque in its purity, whilst another lot declare the same water semi-filtered—sewage and drainage.

This closing of wells has another side to it which merits careful consideration, for it necessitates the extravagance of sinking fresh wells or of depending, as is too often the case in England, for a necessary of life upon the owners of a water monopoly, which, like that of London, may be a monopoly paying certain eminent analysts to prepare deliberate lies and hand the said lies in as "analytical reports." Which, then, is the worse, the polluted well or the polluted analyst?

Brushing aside the jargon of certain analytical experts, which is as much "stocked" as were "Ah Sin's" cards, and worked with the same "intent to deceive," we have the plain question—How are we to be certain of pure water?

Dr. S. Rideal, in an exceptionally sensible book on the subject, entitled, "Water and its Purification," published by Crosby, Lockwood and Son, Stationers' Hall-court, London, E.C., says:—

"However bright and sparkling a water may be, is has been repeatedly proved during cholera outbreaks that it may frequently convey germs. Such water is apt to be preferred by unthinking people, when a water slightly turbid might be perfectly harmless."

Dr. Rideal points out that typhoid germs were found in domestic filters. But although the average domestic filter is a dirty disease disseminator, how few know that it is such? Drs. Sims Woodhead and Cartright Wood tested the filters made by twenty-one manufacturers, and found that the bulk polluted the water—that in point of fact the filtered water contained more disease germs than did the unfiltered water. No less than forty thousand of these murderous filters are in use in our Army and Navy, but none of the members of Parliament, who pose as the friends of "Tommy Atkins" or "Jack," know enough of this sanitary villainy to even ask a question in the House of Commons about it, although these filthy filters have been found to spread cholera amongst our soldiers.

Dr. Rideal, in the work above-mentioned, states that "Dr. Plagge, reporting to the Prussian War Office, condemned all filters made of paper, cellulose, and asbestos, whilst the Pasteur-Chamberland Filter was described as satisfying all 'sanitary requirements.'" Why, then, is it not supplied to our Army and Navy? Dr. Percy Frankland, in a report to the Royal Society, states that Thames water sterilised by filtration was infected with the bacillus of typhoid fever. This water was filtered through a Pasteur filter, with the result that *the organisms refused to grow*, and in five days had disappeared entirely.

In the light of these, and scores of like experiences, one may well ask what is the justification for the sanitary waste like unto this at Wigston and thousands of other places. To sink a fresh well costs a large sum, and is worse than sanitary waste, for a well is always liable to infection.

To avail oneself of the experiences of the greatest

scientific men of our time, and treat such waters by Pasteur filtration, would cost, perhaps, £5, and the result be a germ-free, pure water. It is a sorry reflection that, with all our boasted sanitary progress and congresses, sanitary waste should yet be the rule instead of the exception.

INSANITARY DANISH BUTTER.

MR. D. YOUNG, of Edinburgh, says:—"The statement communicated to the Press by the Danish Commissioner, Mr. Harold Faber, in regard to my pamphlet, entitled 'A Land Flowing with Milk and Butter,' is a significant production. Mr. Faber marshals a set of figures to show that the death-rate per 1,000 per annum in Copenhagen, as well as in Denmark generally, is lower than it is in the United Kingdom. On the other hand, Mr. Faber carefully avoids any mention of the facts stated in my pamphlet as to the bad construction and dirty, as well as insanitary, condition of the byres in Denmark, and the further most important fact that in the vast majority of farmsteadings in Denmark the wells for the water supply to the households, the farm live stock, and dairy uses are within a few yards of the dungsteads. The photographs reproduced in the pamphlet bear conclusive evidence on these points, and my statements in regard to these matters are corroborated by Mr. Speir, of Newton, who, at a recent public meeting in Edinburgh, declared that on 75 per cent. of the Danish farms the dungsteads were in the centre of a hollow square, while the wells for the water supply were within a few yards of the dungsteads, and were 'little better than urine pots.' That statement was deliberately and most emphatically made by a gentleman who has a national reputation as a scientific farmer as well as a sanitarian, and who, as one of the Royal Commission on Tuberculosis, has but recently returned from a tour of inspection in Denmark. If, therefore, the people of Denmark, who regularly drink that sewage water and give it to their dairy stocks, as well as wash their dishes with it, can remain free from typhoid, that is a fact which I shall leave Mr. Faber to explain if he can. The only reply which Mr. Faber makes in regard to the statements of myself and Mr. Speir, as to the dirty and insanitary condition of the Danish byres, is to quote the following passage from the recently-published report of the Royal Agricultural Commission:—"It is clear from evidence before us that in some cases the buildings used for cows and the surroundings are in an unclean and insanitary condition, and that insufficient care is taken to keep the dairies perfectly clean. In the co-operative dairies in Denmark, cleanliness is enforced by stringent regulations, to ensure the supply of sweet pure milk, and to prevent the spread of infectious diseases by dairy products." With regard to this quotation, I have first of all to point out that in the pamphlet criticised by Mr. Faber, I have distinctly stated that the milk, after being delivered by the Danish producers at the 'co-operative dairies,' is handled in a way that leaves nothing to be desired as regards cleanliness; but it is to be remembered that cleanliness at that stage cannot abstract disease-producing organisms previously introduced into the milk. On the other hand, however, as I have stated, and as Mr. Speir also has stated, the milk, before being delivered at these 'co-operative dairies,' is produced under conditions which leave everything to be desired as regards cleanliness and hygienic surroundings. Besides, it has to be noted that the Royal Agricultural Commissioners had no direct independent evidence laid before them on the subject, by witnesses who had specially examined the conditions under which dairying is carried on in Denmark. They had, it is true, some valuable evidence in regard to Danish farming from Major Craigie, who frankly admitted that he had never

been in Denmark, and had his information from the publications of the Danish Government. Judging from their examination of Major Craigie, and also from the passage above quoted from their report, it may be safely said that not one of these Royal Commissioners had ever seen the inside of a typical Danish byre. The Royal Agricultural Commissioners, therefore, had either been led away by the popular notions respecting Danish dairying, or otherwise they had been misled into believing that the well-known and most admirable regulations insisted on by Mr. Busck, in regard to the farms from which the supply of milk for the Copenhagen Milk Supply Company is drawn, were typical of the conditions under which milk is generally produced in Denmark. Their finding on this subject, therefore, is of a piece with another of their findings—namely, that 'as a rule' the British dairy farmers did not understand the rudiments of their business, as 'dairy cows are fed according to various ideas of farmers, or according to the food that may happen to be on the farm, and not upon definite or scientific principles.' As Danish butter is imported into this country at the rate of over a million hundredweights per annum, the public have a vital interest in the sanitary conditions under which that butter is produced. Dairy farmers in particular have by law to produce their milk, butter, and cheese under conditions such as will satisfy an up-to-date sanitary inspector, while, on the other hand, they have got to compete in their own markets with an unlimited quantity of dairy produce from countries where no provision is made for the supervision of dairies by sanitary experts. In regard to the conditions under which milk is produced in Denmark, Mr. Faber shelters himself behind a finding of the Royal Agricultural Commission, which is based on no direct and independent evidence, and involves at the same time a libel charging the British dairy farmer with conspicuous want of knowledge respecting his business. The facts respecting the bad construction and insanitary condition of the byres, and also respecting the wells for the water supply at the Danish farmsteadings being as a rule within a few yards of the dungsteads, as set forth in my pamphlet, are illustrated by photographs taken on the spot, and are corroborated by the independent testimony above referred to. Dare Mr. Faber deny the facts so stated? Dare he deny that on the vast majority of Danish farms the wells for the water supply are in close proximity to the uncovered dung-carts? Dare he deny that the typical Danish byres are of the worst possible construction, that they are insufficiently ventilated, and that the air space for each cow rarely exceeds 300 cubic feet, while in this country our county councils insist upon a *minimum* of 500 cubic feet for each animal in a dairy byre? Dare he deny that on account of the scarcity of litter and the liberal use of laxative food the cows in the Danish byres—in which they are kept for at least seven and more frequently for eight or nine months in the year—are kept in a very dirty state, and through carelessness in milking a great amount of filth inevitably falls into the milking pail? Dare he deny that, as stated in my pamphlet, the milk, on being received at the Danish creameries from the producers, has to be run through a fine sieve, which in a very short time collects a thick deposit of excrementitious matter, through which the milk is filtered, and the sight of this deposit would be sufficient to turn the stomach of any ordinary user of Danish butter? If Mr. Faber dare to deny these facts, then I challenge him to put his denial to the test by calling upon the Danish Government, or the British Government for that part of it, to send out two or more commissioners to investigate and report as to the sanitary conditions under which the milk from which the butter that is imported by the million hundredweights into this country is produced in Denmark. One of these commissioners should be nominated by the Royal Agricultural Society of England, the other by the Highland and Agricultural

Society of Scotland. I care not who they be, so long as they are independent and straightforward men. My only object is to have the truth on this subject brought out fully and clearly in the interests of the public."

For our part, we don't suppose Mr. Faber will accept the challenge. We years ago exposed the methods of puffing Danish butter, and showed the folly of English newspaper editors who allowed themselves to be worked by Danish schemers into befouling English produce and lauding Danish. Mr. Young is a welcome recruit to the cause of truth.

ARSENIC STATED TO BE IN DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE.

"DR. WILLIAMS' Pink Pills for Pale People" have found their way into the Victorian Law Courts. Finding that grocers and storekeepers were being made the medium for their sale in Melbourne, the pharmacy board—having already analysed and found them to contain arsenic—charged one, Taafs, with a breach of the Poisons Act. The evidence of the Melbourne Government analyst, Cuthbert Robert Blackett, showed that each pill contained less than the $\frac{1}{200}$ th part of a grain of arsenic. Andrew William Craig, lecturer on chemistry at the Melbourne College of Pharmacy, testified to analysing some of the pills and finding the presence of arsenic. For the defence an analyst named Frederick Dunn, stated that he found ten pills to contain .03 gr. = .025 of arsenious acid. The box contained 30 pills = .076 gr. arsen. acid—1 pill .0025 gr. = $\frac{1}{400}$ th part of a grain; the whole quantity taken daily = $\frac{1}{80}$ gr. The pills were coloured pink and coated with sugar and farinaceous matter. The pills for the most part consisted of ferri. carb., pot. sulph. and organic matter. In examination he said that Blaud's pills consisted of ferri. carb., pot. sulph., with arsenic in one kind of them. He was forced to admit that there was no arsenic in Blaud's prescription. (The solicitor for the defence here remarked that the Blaud pill which contained arsenic was known as the improved Blaud's pill.) Charles Edward Fulford, the Australian representative for G. T. Fulford, of New York, proprietor of Dr. Williams Medicine Company, swore that he did not know the component parts of the pink pills. They were manufactured in New York and came out here in bulk. In examination he said:—"Dr. Williams does not exist at present; he never existed. The pills are made up from the prescription of a medical man. The pink pills contained more ingredients than Blaud's pills, according to Mr. Dunn's analysis." Charles Stewart, a qualified medical man, said that a whole box of the pills taken for a dose would do no harm, and that children could take larger doses of arsenic than adults. He added that 1 minim tinct. of opium would kill a child. The case was heard by five Justices of the Peace on June 7, and the chairman, Dr. Featherston, in giving the decision of the bench against the pharmacy board, said: "The majority are for dismissing the case, but I disagree with them." The defendant was allowed \$52 in costs. The pharmacy board has appealed against the decision, and the question will shortly be decided in the Supreme Court.

If this be correct, we trust this nostrum will be summarily dealt with in England, and that under the Act the trash must be labelled poison or its vendors penalised.

EDISON AND QUACKERY.

EDISON's latest discovery, the *Daily Chronicle* reports, is that his eye has been affected to such an extent by work on the X rays that it was "a foot out of focus,"

and has taken three months to become restored to its normal condition. Furthermore, he says his hair fell out in handfulls, and three months ago he could not close his hand at all, but the abstinence which has benefited his eyes has also had the effect of bringing his hair back and allowing him to make a fist with only some little trouble and pain. One of Edison's assistants however, fared even worse than himself, hair, beard, eyebrows and eyelashes having all fallen out in this case, while the skin became wrinkled and burnt. But, according to Edison, a few months will restore him, and he will be better so far as appearance is concerned than he was before, as the skin which has been discoloured and destroyed by X rays will be replaced by a new epidermal covering that is softer and finer than the original. In connection with this matter the question suggests itself whether all the curious stories in which Edison's name occurs are set afloat by himself or with his sanction. If he believes them to be true he must be a wonderful man indeed.—*Pharmaceutical Journal*.

A SANITARY EXPERIMENT AT ST. HELENS.

For a period of 19 weeks, since the introduction of the "block" system in the emptying of ashpits, there had been 4,092 emptyings at a cost of £611 4s., as compared with 3,141 emptyings at a cost of £746 6s. on the old system in the corresponding period last year. In other words, on the new system, while there had been 951 additional emptyings, there had been a saving of £135.

GENIUS AND FOOD.

ROSSINI never ate any breakfast, and frivolous critics say this is why he never wrote serious music. At a banquet given by Napoleon III. Rossini ate twice of the Italian spaghetti, and demolished his portion with gusto.

Wagner was a highly practical feeder, ate very fast, placing his food in his mouth and gulping it down while he talked.

Napoleon III. had a "porcine" side to his nature. He was rather a glutton, and the pictorial promiscuity of his salon quite horrified English visitors who enjoyed his hospitality.

Zola would not take honours as a gourmet. He employs a good cook, but eats sparingly himself, and is careful as to wines. His dinners are daintily served.

Charles Reade could not be induced to taste mackerel. He shirked beef, never tasted soup, beer, and fatty dishes. He was fond of mutton and baked apples. He hated to get into evening dress for dinner.

IMPORTANT DECISION IN A MILK CASE.

IN the Sheriff Court House, Paisley, on Thursday, September 9, before Sheriff Martin, James King, dairy-keeper, Sandholes, Paisley, was charged at the instance of William Wilson Kelso, sanitary inspector, with a contravention of the Food and Drugs Acts, by having, on August 1 last, from his cart, sold to the Sanitary Inspector two-pennyworth of sweet milk which was deficient in natural fat to the extent of 14 per cent.

A plea of not guilty was tendered.

The analysis was admitted as correct, and Mr. D. D. Dickie, writer, who appeared for respondent, stated he would rely solely on proving a warranty. Evidence was led, and King produced a Deed of Agreement between a farmer and himself, under which King was to get the whole milk of the farm warranted pure. He also produced a label bearing that on the date in question he had been supplied from that farm with various quantities of sweet milk, skim milk, and cream,

warranted genuine. It was this sweet milk he sold to the Inspector. He admitted having another barrel of sweet milk on his cart. He also admitted he got five or six farmers' milk. In all of this he was corroborated by two witnesses, but as they knew nothing of the milk after it left the dairy premises, they could not speak to what milk was supplied to the Inspector.—Mr. William Walker, writer, for the prosecutor, argued that the warranty had not been proved. One of the papers was nothing more than a memorandum of agreement for supplying milk, and the other a label showing that certain quantities of sweet and skim milk and cream had been delivered at respondent's shop on the morning in question. The writing and figuring on this label was only in pencil. Objection was also taken to the want of stamp on the contract, and it was contended that the warranty must be proved in the principal documents, and not in the label, and that the latter failed in its purposes of identifying the particular milk sold in respect, it was general and not specific, and not attached to any specific quantity of milk. Besides, there was only the unsupported testimony of the respondent that the milk the Inspector got was the same in every way as that to which these documents applied. The other two witnesses could say nothing about the milk, as it was sold on the street, and they were not present. The Sheriff said the case appeared to be one of great importance, alike to the public and the milk trade, and would adjourn the case till Saturday to allow him to look carefully into the matter before coming to a decision.

On Saturday he issued the following judgment:—

"On 1st August, 1897, the complainant, through one of his assistants, purchased from the respondent in person two pennyworth of sweet milk, which, on being analysed, was found to be deficient in natural fat to the extent of 14 per cent.

"The present complaint is brought under the 6th Sec. of the Sale of Food and Drugs Act, 1875.

"The respondent has not challenged the analysis, but he pleads the provisions of Sec. 25 of the Act, especially the clause relating to written warranties of quality, which, he contends, entitles him, in the words of the statute, to be discharged from the prosecution.

"Before considering the terms of this Section it may be well to keep clearly in view the purpose of the statute as explained by Coleridge, L.C.J., in *Dyke v. Gower*, 1892, L.R. 1, Q.B. 220.

"This Act was passed with the object, not of punishing the seller, but of protecting the buyer, and of insuring, as far as it is possible to insure such a result, that a person who buys an article of a particular description should get a genuine article and one which contains the proper quantity of the different elements which an article of that description ought to contain.

"Now, it is admitted that what the complainant demanded from the respondent was a certain quantity of

'sweet milk,' and I do not understand the respondent to contend that, as a matter of fact, the complainant received an article of the nature, substance, and quality which he demanded. That being so, there has been, *prima facie*, an infringement of the statute, rendering the respondent liable in penalties unless he can save himself by the provisions of Sec. 25, which provided that if the defendant could prove to the satisfaction of the justices that he purchased the article in question as being the same in nature, substance, and quality as that demanded, and with a warranty, and that he believed at the time he sold it that the article was the same, and that he sold it in the same state as he purchased it, then he was to be discharged.

"Now, there must, as I read this section, be a conjunction of the three conditions, all of which must be proved to the satisfaction of the Court if the defence is to prevail, and the question comes to be whether the respondent has satisfied these three conditions. It is not contended that the article which the respondent sold to the complainant was the article which was demanded by him, and according to the decisions in the cases of *Pain v. Boughtwood*, L.R. 24. Q.B. 353; *Dyke v. Gower*, 1, Q.B. 353; and *Morris v. Casbet*, 56, J.P. 649; it would appear as this statute has been interpreted in England, a conviction may be obtained against the seller, even though he was ignorant of the fact that the article which he was selling was impure.

"If these decisions are to be viewed as sound (and no Scotch decisions to an opposite effect were referred to), then it follows, I think, that, warranty or no warranty, the respondent is liable to conviction simply by being the vendor of an article which was not of the nature, substance, and quality of the article demanded by the purchaser, and such a result would be in accordance with the purpose of the Statute as explained by Lord Coleridge, and to which I have already referred. Looking to the terms of the English decision, it is not necessary for me to express my opinion as to whether the warranty in question is in the form and of the kind required by the Statute, all the more as I am prepared to decide this case upon another and a broader ground. The last of the three conditions in Section 25 is that the article is sold in the same condition as when it was purchased. The respondent, acting under able professional advice, has limited his proof to evidence bearing more or less closely on the question of warranty.

"From the view which I have come to take of this case, I regret this limitation, as there are several points upon which I should have desired fuller information. I can only, however, deal with the evidence before me, and if, in my opinion, it does not meet the prosecutor's case, it may be that the respondent had no *reliable* evidence to lead upon that point; or it may be that *per incuriam*, he omitted to lead it. In any event, he has failed to satisfy me that he sold the milk in question in the same state as when he purchased it, and I make

"KURRUWA"

(This word is Registered, and used as a Trade Mark for Best Quality Articles only, and has now become synonymous with quality for the following specialities. "We are of opinion that all the products bearing the guarantee of this name may with equal justice receive our highest commendation."—*The Family Doctor*.)

"KURRUWA" DELICIOUS, SOLUBLE COCOA.

Manufactured in England on the popular Dutch principle.

ANALYTICAL REPORTS.

"The Laboratory, Bow and Bromley Institute, London, E.

"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average.

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skilful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,

Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London; Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 4-lb., 8d., 5-lb., 1/4, 1-lb., 2/8.

This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

"KURRUWA" CHOCOLATE ALMONDS.

"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*."

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

Please ask your GROCER or CONFECTIONER for these specialities, see that they are marked "KURRUWA," and, if you cannot obtain them, write direct to THE "KURRUWA" ASSOCIATION, 2 and 3, IDOL LANE, LONDON, E.C.

this the ground of my judgment against him. In the circumstances a small fine might satisfy the ends of justice, the fine would therefore be £1, with £1 1s. of expenses, or ten days imprisonment."

THE WATER-AT-SPIRIT-PRICE SWINDLE.

DIFFERENT POINTS OF VIEW.

THE *Oxford Chronicle* says:—How much depends upon the point of view! Two of our contemporaries discuss the action of those magistrates who, in the cases recently referred to by us, have taken a decided course regarding the notices exhibited by certain publicans stating that the spirits sold in their houses are diluted. The *Licensed Victuallers' Gazette* heads its article "The Silly Season in Cornwall," while *Food and Sanitation* adopts as an appropriate expression of its sentiment the line, "Publicans and the Water-at-spirit-price Swindle." The opinions of the writers are fairly, though somewhat tersely, expressed in their head-lines. The organ of the licensed victuallers is sarcastic at the expense of the magistrates, while it describes their action in requiring the withdrawal of the notices as "most improper," and urges the local members of the trade to "protest against this indecent interference with their rights." *Food and Sanitation*, on the other hand, praises the magistrates for "protecting the publicans from being driven to become rogues at the bidding of the owners of 'tied' houses." It says it is a significant fact that the dilution notices are particularly favoured by brewers who own these houses, and "the honest, self-respecting publican has to face the peril of eviction or comply with the will of the swindling brewer." After all, the view of *Food and Sanitation* strikes us as being the more disinterested of the two.

At Somerton, John Newton, keeper of the Unicorn Inn, Somerton, was charged with selling whiskey adulterated with 33 per cent. of water, whereas the maximum adulteration allowed by the Statute was 25 per cent., and Supt. White put in an analysis to that effect.—Defendant pleaded guilty, but said he had not done it wilfully, but must have made a mistake. He had kept the house for the past fourteen years, and it had been the first complaint against him.—Fined 10s. and costs 5s., the Chairman informing defendant that the conviction would be registered on his license.

At Margate on September 15, William Wills, for selling rum at the Mulberry Tree Inn, adulterated with 13·8 per cent. added water, was fined 21s. with 22s. 6d. costs.—Thomas Jezard, of the Wellington Inn, for selling rum 5·8 degrees below strength; and Edward Stuart Turner, of the Imperial Hotel, for selling gin 3·2 degrees below strength, were each fined 10s. with 25s. costs.

REFUSING TO SELL FOR ANALYSIS.

At Rotherham, on September 16, Daniel Jenkinson, farmer, Tinsley, was summoned for having refused to supply Mr. Chas. E. Parkin, jun., an inspector under the Food and Drugs Act, with a pint of milk for the purpose of analysis.—The Town Clerk (Mr. H. H. Hickmott) appeared on behalf of the complainant, and Mr. W. M. Gichard defended.—Mr. Charles Edwin Parkin, jun., said he was an inspector under the Food and Drugs Act. On August 25 he received instructions from the head inspector to make certain inquiries in Wellgate. About seven o'clock on the evening of that day he saw the defendant selling milk. Defendant's cart was outside the Hare and Hounds Hotel. He asked the defendant to supply him with a pint of new milk, and offered him 2d. and a bottle. He replied that he had none to sell. Defendant handed his can to Mr.

Jepson, the landlord, and said "Take the lot." Witness asked the defendant if he had any more in the cart, and he replied that he had not. He proceeded to the cart and took the lid off one of the cans and found it contained milk. He again asked the defendant to supply him with milk for the purposes of analysis and he refused to do so, and added that it was ordered. He asked defendant if he knew who he was, and he replied that he did. He asked the defendant his name, which he gave, but he refused to give the street in which he lived at Tinsley. He told the defendant he should report the case.—In cross-examination, witness said there was more than a pint in the can which he looked into.—Thomas Edward Charles, assistant to the inspector, gave corroborative evidence.—Mr. Gichard said the defendant was in the habit of disposing of all surplus milk which he had after he had supplied his customers, and on the evening named he had refused that person. The only pint which he had was in the can which he handed to Mr. Jepson, and that had been previously ordered. With reference to the statement that there was more milk in the cart, the defendant stated that there was not a gill left in the bottom of three cans.—The Chairman said they had given the case considerable attention, and they felt the inspector had done his duty. There was considerable suspicion in the case, but there was also a doubt, and they would give the defendant the benefit of that doubt.—The case would be dismissed.

A TALE OF A TUB OF BUTTER.

At Manchester, on September 15, before Mr. Headlam, stipendiary magistrate, Leonard Letter, who trades as Cohen and Co., butter and margarine merchants and commission agents, Hanging Ditch, Manchester, was summoned for having given a warranty to a retail dealer named Powell declaring margarine to be pure butter, this being contrary to the provisions of the Food and Drugs Act. Mr. Hudson conducted the prosecution on behalf of the Corporation, and Mr. Jordan, barrister, defended. The case for the prosecution was that Powell, who formerly carried on business as a grocer and provision dealer in Oldham-road, bought four firkins and two kegs of butter from the defendant, and he received a warranty that it was pure butter. An inspector went to Powell's shop, and in consequence of an analysis of a sample taken from one of the kegs purchased from the defendant, an information was laid against Powell, but this was dismissed by the stipendiary when the warranty was produced.—Powell gave evidence in support of this statement.—In cross-examination by Mr. Jordan, he said when he bought the kegs at Cohen's he gave the warehouseman 6d. to send the goods up soon. The warehouseman pointed to two kegs and said, "These are a little fresher," and upon his suggestion witness agreed to an exchange of two kegs, and he gave the man another sixpence. He had made a claim against an insurance company on the ground that his shop had been broken into.—Mr. Jordan: They haven't paid you?—Powell: They haven't paid me yet. I haven't pressed them. They said as soon as they got a police report they would pay.—You say there was about £51 stolen in cash, and you gave that to the Official Receiver as the cause of your bankruptcy, and he and the court did not believe you? I didn't want them to believe me. They could please themselves whether they believed me or not. I knew in my own mind it was so.—In further replies to Mr. Jordan, witness said he described the £51 as the amount taken in two days at the shop.—Mr. Jordan said his clients had carried on business for a number of years, and had had dealings with people in all parts of Lancashire, but this was the first time that any suggestion of fraud had been connected with their name. He thought the inference of the man Powell

that the warehouseman had substituted inferior goods for those purchased was incredible. Not the slightest complaint had been received with regard to any other portions of the large quantity of butter which defendants had sold. Powell, he suggested, had been selling margarine as butter, and tried to shelter himself behind the defendant's guarantee.—The case was adjourned.

TINCTURE OF RHUBARB.

AT Ingleton, Thomas Davies, Horton-in-Ribblesdale, was charged by Arthur Randerson with selling him six ounces of tincture of rhubarb, on July 3, the same not being such as required by law. Defendant pleaded not guilty. Randerson said, on the day in question he purchased six ounces of tincture of rhubarb from the defendant's wife, and for which he paid 1s. 6d. At her request he divided it into the usual three parts, one of which he forwarded to the county analyst, who certified that it was deficient in alcoholic strength and was destitute of saffron. The defendant's wife said they got it from a man named Jackson, who joined them at a bottle. The defendant said that they had never sold any, and that they got it for their own use. He purchased it from Richardson, of Skipton, but got no guarantee with it except that it was good. He had not sold a pennyworth to anyone. Mr. Randerson said that as the chemist who supplied it was dead, and the defendant therefore had no remedy, the prosecution would be satisfied if the defendant would destroy the remainder and pay the costs, £1 14s. This was agreed to. In answer to the Bench, Mr. Randerson said he could not proceed against the manufacturer unless that person gave a guarantee of the article supplied.

ADULTERATED BUTTER.

SARAH ANN HOWLE, provision dealer, Albert-street, was summoned at West Bromwich, on September 20, for selling margarine as butter on August 30.—An inspector purchased half-a-pound of butter from defendant, which was found to contain 80 per cent. of margarine.—Mr. Sharpe, for the defence, said defendant purchased the article as butter from a grocer at Oldbury, and she sold it as such.—The Stipendiary imposed a fine of £5 and costs.—Mr. Sharp asked the Stipendiary to allow the payment of the fine to stand over for two months, and in the meantime his client would proceed against the person who sold her the butter, to recover the amount of the fine and costs.—The application was granted.

RASPBERRY WINE.

AT Liverpool, on September 15, an information was laid at the instance of Mr. Collingwood Williams, the Liverpool public analyst, against Mr. Hunter Ritson, a local grocer, for having sold a bottle of raspberry wine which contained salicylic acid at the rate of 130 grains per gallon. The case was defended by Messrs. Paterson, of Glasgow, the manufacturers of the wine, Mr. Tobin, barrister, appearing on their behalf. Mr. Williams stated that he had analysed the wine, and found that it contained 130 grains of salicylic acid per gallon, whereas, in his opinion, even in a case where the pure fruit was used, not more than 10 grains per gallon was necessary. He admitted, in cross-examination, that the bulk of raspberry wine is made from fruit essences, and not from the fruit itself, and when made from the fruit direct it required more of the acid to preserve it.—Mr. Tobin, for the defence, contended that no more acid had been used than was necessary, seeing that the manufacturers in this case used the pure fruit.

He was prepared to call medical evidence to show that the wine in question did not contain acid to an injurious extent.—Dr. Baron stated that in his view 130 grains of the acid per gallon was not harmful or injurious in any way.—The Magistrate said that this evidence appeared to him sufficient. The acid was not added for any improper purpose, but simply for the purpose of preserving the wine, and he had medical evidence that there was nothing prejudicial in it to the extent to which it had been used in this case. He, therefore, dismissed the information.

A COMPLIMENT TO THE BERMONDSEY INSPECTOR.

CHARGED at Southwark on Sept. 15 with inflating his profits by diluting his milk with 20 per cent. of added water, Charles Kent, a Rotherhithe milkman, inveighed bitterly (says the *Daily Mail*) against the pernicious activity of Chief-Inspector Thomas, of the Bermondsey Vestry, at whose instance the summons was issued.

"I sold the milk to help my widowed sister," he wailed.

"It is a family affair," retorted the Inspector. "His grandmother and his aunt and his sister are all in the business, but whenever I take a sample I'm told that somebody else is responsible."

"You came blundering into my mother's house," replied the man of milk, with pathetic indignation, "and I said, 'You are trying to drive me to beggary.' So he has, your worship. He has been a complete old nuisance, what with his drains and his samples, and one thing and another."

"Really, Mr. Thomas," said his worship, "he has given you an excellent character as a public servant."

The Inspector modestly expressed his thanks, and Kent was mulcted in the sum of £4 and 12s. 6d. costs.

A VIGILANT INSPECTOR AND BAD MEAT.

HARRY LASHMAR, of 24, Cromwell-road, Redhill, was summoned, on September 20, for preventing J. Paxton Humphrey, inspector of nuisances, from entering certain premises—stabling and pig styes—in High-street, Redhill, and from inspecting certain meat deposited for the purpose of preparation for sale, and intended for the food of man.—Dr. C. J. Grece supported the summons, and Mr. J. Dennis, of Croydon, defended.—Defendant pleaded not guilty.—Dr. Grece said that if the magistrates adverted to the date mentioned in the information they would see that it corresponded with the date of a market which was held at Redhill. At that market various articles for consumption were in the habit of being sold. The market attracted a great concourse of persons not only from the borough, but from the surrounding parishes. The inspector had made it his duty to be exceedingly vigilant in watching the provisions which were brought to the market, and he had been exceedingly vigilant especially in regard to meat that was brought from distant parts for sale. Some of the meat was in rather a questionable state and more or less unfit for human food, and it was sold to the poorer classes. Collateral with that fact he would bring to the notice of the Bench that under the Reading branch of the South-Eastern Railway there is a culvert which spans the Merstham Brook. The culvert had been undergoing enlargement in the shape of a subsidiary culvert for taking away the superabundance of water in time of flood. The inspector received information in the course of Friday, the day preceding the occurrence alleged in the information, that some meat was deposited—in fact, secreted—it was no use mincing language—in the auxiliary culvert that was being constructed. The Inspector watched the place for a number of hours in order to detect any person carrying the meat away.

Defendant was seen to remove the meat to certain premises in Brighton-road. The Inspector went to the premises to see the meat. Some conversation took place between the Inspector and the defendant, in respect to carting the meat away in order that it might be taken before the justices and examined. Defendant said that the Inspector might as well pay him as anybody else to take the meat away. The Inspector replied that he should make no payment whatever to him, and he thereupon went to Mr. Marsh for a conveyance. When he returned the defendant was locking up the door. He told the defendant that he should require him to open the door, but he refused. Defendant knew perfectly well that the Inspector had left the premises only temporarily, and, therefore, by his action the course of the law was interrupted. There was not the slightest doubt that the meat was to be disposed of during the evening, on the day which the Inspector saw it.—John Paxton Humphrey, inspector of nuisances, stated that on August 13 he received information from the surveyor that a quantity of meat was stored in the culvert under the Reading branch of the South-Eastern Railway. He watched there until nearly 12 o'clock at night, and was there again about 3 o'clock the following morning. He saw defendant take two bags of meat from the mouth of the culvert. The meat was entering a stage of decomposition. He had seen meat in a similar condition trimmed up for sale. He told the defendant that he should seize it to be dealt with by the justices. Defendant said: "You will have to cart it away, and you may as well pay me for doing it as anyone else." He told the defendant that he should not pay him. He then went to Mr. Marsh's establishment to obtain a cart. When he returned defendant was locking up the door. He told the defendant that he desired to see the meat, and pointed out that he was incurring a serious responsibility if he refused him admittance to his premises. He replied: "Who do you think you are trying to frighten?" He (witness) then left.—By Mr. Dennis: Defendant said the meat was for the pigs. There was a number of pigs close by. The meat would be suitable for pigs. He satisfied himself that the meat was totally unfit for human food.—Mr. Dennis raised two technical objections. His first was in reference to defendant being charged with refusing to allow the inspector to inspect the meat. The inspector had told them that he examined the meat. His second objection was that there was no evidence to show that the meat was intended for human consumption.—Dr. Grece said that defendant was charged with preventing the inspector from "entering and inspecting." He was debarred from entering defendant's premises. The Bench considered the case proved, and inflicted a fine of £1 and costs.

WHERE SANITARY INSPECTORS ARE WANTED.

IN Rotherhithe the Council have been informed that numerous defective conditions exist. The *City Press* states that an inquiry was made by Dr. Young in 1893, with the result that the Council found it necessary to make a representation to the Local Government Board that the Vestry had failed to appoint a sufficient number of sanitary inspectors. In June, 1895, the Board replied to the effect that they thought it desirable that the staff of inspectors, which had been increased, should have a trial for twelve months. This period elapsed in June, 1896, and the committee shortly afterwards informed the Board that they would be glad to hear the Board's decision as to the sufficiency of the staff. In reply it was intimated that the Board proposed that one of their medical inspectors should make inquiry into the subject early in 1897. The result of this inquiry is now awaited.

In regard to Lambeth, the committee's last annual

report referred to the correspondence which had passed between the Council and the Vestry of Lambeth on the results of an inquiry made by Dr. Hamer into the sanitary condition and administration of the parish, and it was pointed out that the Vestry had, since Dr. Hamer's inquiry, made some proposals to the Local Government Board for an increase of its sanitary staff. The decision of the Local Government Board was subsequently communicated to the Council. It was to the effect that the Board assented to the Vestry's proposal to appoint four additional Sanitary Inspectors. At the same time the Board stated that, having regard to the high average population of the Sanitary Inspectors' districts over the whole area of the parish, they could not but express regret that the Vestry had not seen its way to increase the staff still further. They, moreover, requested that the Vestry would instruct its Medical Officer of Health to prepare a report on the working of the new arrangement when it had been in operation for a year, and that the Board might be furnished with a copy of such report. The year expired in June, 1897.

AN inquiry has been made into the sanitary condition and administration of the parish of Fulham, and it has become necessary for the vestry to increase its sanitary staff. The vestry have determined to appoint an additional sanitary inspector, but the question of providing a disinfectant and shelter has been deferred pending the decision of the vestry with regard to the erection of a dust destructor.

AT Eltham the return of sanitary inspectors prepared by the medical officer in December, 1895, showed that the sanitary inspector employed in the parish of Eltham also acted as road foreman, and in view of the fact that complaint had been made to the Council that the inspection of the parish was inadequate, and that there was for that reason neglect to maintain it in a proper sanitary condition, the committee thought it well that Dr. Young should make an inquiry into the condition of the parish. On hearing of the proposed inquiry the Lee District Board intimated their intention to relieve the sanitary inspector of his duties as road foreman. It was, however, decided to proceed with the inquiry, and the medical officer has been instructed to have a further inspection of the parish made at the expiration of twelve months.

AFTER some correspondence with the Holborn District Board on the question of the adequacy of their sanitary staff, the committee thought it well that an inquiry should be made by one of the Council's assistant medical officers of health into the sanitary condition and administration of the district. An inquiry was accordingly made by Dr. Young, and his report showed that the condition of houses and the character of the population in Holborn were such as to require an active administration, and that the existing staff was inadequate for the purpose. The medical officer suggested that the district board should at once adopt the recommendations contained in the report as to an increase in the number of officers, and should proceed more largely to regulate houses let in lodgings. The subject of dust collection in Holborn had already been considered by the committee, and had formed the subject of reports to the Council. Dr. Young's inspection afforded confirmatory evidence of the need for the adoption of means for securing the more frequent collection of such refuse. The courts and alleys especially indicated by Dr. Young also required the attention of the Board, and the need for a suitable shelter within the limits of the district for the accommodation of poor persons during the disinfection of their rooms was emphasized. The committee have had the report printed, and have sent copies to the District Board, with a request for their observations upon it. Copies of the report have also been sent to the members of the Council, and placed on sale.

Similar circumstances have been in existence in

Clerkenwell, and an inquiry by Dr. Young into the sanitary condition and administration of the parish of Clerkenwell has been made. His report showed that the staff, as it existed at the time of his inquiry, appeared to be inadequate for the proper performance of the duties devolving upon the sanitary authority. Dr. Young was, however, not prepared to assert that the appointment of a clerk to the sanitary department, which was contemplated, would not be found sufficient for immediate purposes, and the committee felt it right, therefore, that further experience should be gained before the appointment of an additional Sanitary Inspector was recommended by the Council. The following is a brief summary of the matters to which Dr. Young considered the attention of the Vestry should be given: (1) The existence in houses of defective conditions. For the most part these are of such a character as to be readily capable of remedy under the powers given by the provisions of the Public Health (London) Act. (2) The existence of courts and alleys which are narrow and badly arranged, and of houses which are old and worn out. Concerning these, the Vestry should see the necessity of applying for closing orders, or taking other proceedings under the Housing of the Working Classes Act. (3) The existence of a considerable number of houses in the district occupied by members of more than one family. Many of these are not of such a character as to need frequent public inspections. Others, again, are not so well circumstanced as regards the conditions in which they are kept, and these need registration and regulation under the provisions of Section 94 of the Public Health (London) Act. (4) The absence of a register containing a complete list of the workshops in the district, and setting out the condition of these premises. The preparation of such a register should be proceeded with forthwith. (5) The failure of the present system of house refuse collection to ensure its removal every week from all premises. A reorganisation of the system should at once be undertaken so as to ensure this object. And (6) the desirability of requiring in the by-laws as to houses let in lodgings a minimum cubic space per head of 400 feet in rooms occupied by day and by night, instead of 350 feet, which is stated to be the amount specified in the draft by-laws. The committee have forwarded a copy of the report to the vestry, and asked for its observations, and a reply is now awaited. The report has also been printed and published.

CORRESPONDENCE.

DIPHTHERIA AT DEVONPORT.

To the Editor of FOOD AND SANITATION.

SIR,—The inhabitants of Keyham Barton are very much pleased to state that an employee of the lord of the manor is now trying to partially abate the nuisance complained of. It is not the first time this endeavour has been made, nor will the nuisance stop with this man's work.

There is work for our Council in this quarter, and work which must be done, or ere long there will be not only diphtheria, but other infectious diseases equally as bad.

The source of the nuisance complained of is the smell which arises not only from the improper drainage of the farm, but from the decomposed matter and filth in the vicinity of the pigs' houses at our back, where about three cartloads of refuse from the Naval Barracks are tipped daily.

The smell from this heap at times defies the language of decent words to express. Surely the Council, if they

are powerless to compel the lord of the manor to make the front road fit for traffic, and the back lane from being from six inches to a foot above the sill of some of the back doors, have sufficient power to prevent a nuisance which threatens the health of so many inhabitants of Devonport.

If they do possess this power, and fail to exercise it, we shall, in the event of a fatal case of infectious disease, hold them morally as guilty of manslaughter as any criminal in the court of justice.

We deprecate the action in most cases of rushing into print without trying more conciliatory measures, but since your paper has already obtained and given publicity to so much truthful information, and the sanitary affairs of this portion of the town have been so grossly neglected, we feel we are in no way to blame for asking you to publish in your paper this one letter, not only on our behalf, but for the welfare of the public in general.

THE INHABITANTS OF SPENCER AVENUE

(MORICH TOWN).

[This is another case of "matter in the wrong place." If the pig manure and the excreta from the Naval Barracks were sensibly treated it would be worth about £3 per ton instead of being a nuisance. Devonport has a go-ahead, clever business man in Mr. Hudson Kearley as its Parliamentary representative. He could no doubt tell the inhabitants how Bremen makes the spread of disease by such nuisances impossible and makes a profit on the business.—EDITOR.]

SWEETER THAN SUGAR.

THE newly-discovered chemical substance, sugarine, is likely to have an important influence upon commerce in several directions. Unlike saccharine, which never became very popular, sugarine contains none of the obnoxious para acid. It is a chemically pure substance, 600 times as sweet as sugar, and yet obtainable at one-tenth the cost. If it should prove the healthy, cheap, and perfect substitute for sugar which the discoverer, Mr. E. R. Savigny, believes it to be, it will doubtless soon be utilised for domestic and industrial purposes, especially as its antiseptic properties are said to cause jams and other articles prepared with it to keep for years. The opinion of experts and the test of experience will soon show how far the inventor's expectations are realisable.—*Chem. Jour.*

A NEW PERFECTION SYSTEM.

THERE is a druggist in Ohio who makes a baking powder feed him. He offers two and one-half pounds of it for the best biscuit, and the same amount respectively for the best chocolate cake, the best cookies, the best white cake. Nothing is said concerning return of non-prize-winning samples, so that if the contest is at all general and successful this ingenious individual must gather in enough biscuit, cake and cookies, to last the term of his natural life. And he catches 'em in another respect, too, for every contestant must use his brand of baking powder, at so much per pound. Isn't this an ideally perfect scheme to provide both food and income.

AT THE VEGETARIAN CONGRESS.

SCENE: Memorial Hall.

Visitor: That cake smells very appetising.

George B.-r-n-r-d S-w: It's a concoction by some of our vegetarian expert cooks.

Visitor: Can I have some?

G. B. S.: I'll give you some if you'll eat it outside. It would give us away if you died in the hall.

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What it is not!

BOVRIL is not merely a Meat Extract containing only the stimulative without the nutritive constituents of Beef. With the ever increasing rush of Life, commercially and socially, there arose a demand for a stimulant without deleterious after-effects; hence the introduction of ordinary Meat Extracts, Meat Essences, &c. But stimulant without nourishment simply stirs up the Fire of Life without providing for its continuance, thereby exhausting the system; the result being precisely the same as if poker were solely depended on to FEED the household fires.

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Food and Sanitation.

SATURDAY, OCTOBER 2ND, 1897.

THE MORAL OF MAIDSTONE.

The *Pall Mall Gazette* has published a very interesting contribution on Maidstone as "A Study in Local Self Government," in which it shows the penny-wise-pound-foolish policy in regard to water analysis, but *The Pall Mall*, *The Standard*, *Daily Chronicle*, *Daily News*, and the rest of the influential organs of public opinion are hopelessly at sea about the question. Let us take it for granted that the Waterworks Company are responsible for the 1,000 cases of typhoid and the

deaths of 30 or more people. Justice may demand what it will not get, that the persons so responsible should be put upon their trial for manslaughter, but whilst this gives abundant scope for leader-writers, it is of no use to the public. The real point is lost "sight" of by every local authority, by the bulk of their advisers, and by the whole of the Press. *It is a fact that there is not one city, town, or village in the United Kingdom which is not liable at any moment to be in the lamentable plight of Maidstone*, for there is not one community which at the present time receives for drinking purposes *pure water*. The filtered water supplied, be it by London or any other companies or municipalities, contains organisms which may be deadly or otherwise, and over the dissemination of which the water companies have no effectual restraining influence. Strive as they may, *there are no filter beds in existence which will yield a germ-free water*. London's supply is only really semi-filtered-sewage and drainage, and the horrors of Maidstone confront every place in the kingdom, and may at any moment afflict them. Any accidental pollution of a source of supply such as that at Farleigh, can, under our present happy-go-lucky-system of filtration, appear in the filtered water supply used for human consumption, and spread disease and death, as was the case not long ago at Worthing, and is to-day ruining Maidstone, and may just as easily to-morrow send typhoid broadcast over London. Maidstone is therefore neither no better nor worse than every other place in the kingdom. It is want of knowledge which caused writers like those in the *Pall Mall*, *Daily Chronicle*, *Daily News*, etc., to blame the parsimony of the Maidstone local authority, or to pour the vials of their journalistic wrath upon the Waterworks directors. Supposing, for example, that Dr. M. A. Adams, eminent man of science, as all who know him personally can aver, analysed the Maidstone water every week, and made bacteriological cultures—that would not have prevented the Maidstone infection, inasmuch as the *filtered water* even from the most perfect waterworks filter systems in use in this kingdom, would contain typhoid germs from any initial infection in a larger or smaller quantity, according to the efficacy of the filtration.

All filtered water delivered by any water company can spread infection, as did the Maidstone water, and before any scientific results could be obtained warranting the closing of an infected source of supply the disease germs would have been delivered to the consumer. The articles in the daily papers on this subject, and the talk about the penny-wise-pound-foolish policy in analysis are only so much waste of ink and paper and exhibitions of journalistic incapacity.

To secure immunity from infection by typhoid or cholera pollution of water the filtered water must be *germ-free*, and no filter-bed systems yield germ-free water, but in recent years science has discovered how to procure and ensure germ-free water. One may infect the unfiltered water with typhoid, cholera, or any other disease germs, but, as was proved by the lengthy experiments of Drs. Cartwright-Wood and Sims-Woodhead, Pasteur filtration removes those disease germs and yields an *absolutely germ-free water*. It is a sorry reflection on our boasted sanitary pre-eminence that ignorant India, in Darjeeling, has the sense to provide Pasteur filtration for its water supply, whilst in England not one city, town, or village has had the public spirit or intelligence to place itself outside the danger of terrible visitations like this disease and death at Maidstone. In many places, as in London, influences are ever at work to preserve the continuance of monopolies which may any day reap their harvest of death at a rate a thousand-fold that of Maidstone. It is the inhabitants of such places who ought to take to heart the moral of Maidstone, and our great newspapers ought to be the first to emphasise this. Dr. Percy Frankland, F.R.S., in his work on "Micro-organisms in Water," gives the number

PURE, WHOLESOME, DELICIOUS.

BIRD'S CUSTARD POWDER

The unfailing resource of every Lady of the House and successful Housekeeper.

NO EGGS! NO TROUBLE! NO RISK!

of micro-organisms found in the Thames and Lea waters above the intakes of the several companies during three years. Water collected at Hampton had as many as 92,000 per 1 c.c.; whilst Chingford water had 84,000 per 1 c.c. Water collected above the intake of the York Waterworks had 33,400 micro-organisms per 1 c.c.

The Local Government Board caused regular bacteriological examinations to be made of the London water supplies for drinking purposes. Filtered Southwark water, as supplied to the public, contained as many as 2,270 micro-organisms per c.c.; Grand Junction filtered water, 4,894 per c.c.; and Lambeth filtered water, 2,587 per c.c.

As Professor Percy Frankland said at the York Congress of the Sanitary Institute in 1886—"It must be remembered that the micro-organisms, which are known to produce disease, and which are termed pathogenic, do not in any way differ from the ordinary organisms in water, so as to render it probable that they would behave differently in the process of filtration; but on the contrary, there cannot be any serious doubt that their behaviour under these circumstances would be precisely similar."

The above shows beyond question that were London water to be infected as Maidstone water was, a proportion of the disease germs could be present in the filtrate, and do to London as Maidstone has been done by. This is no alarmist picture—it is a plain statement of a grave danger, and the terrible visitation at Maidstone will not be without benefit to the United Kingdom if it arouses local authorities to the dangers of the present insanitary and unsafe water filtration systems.

THE FLASH-POINT TO BE RAISED TO 105 DEGREES.

THE London correspondent of the *Liverpool Daily Courier*, says:—

"Relying on the opinion of a Board of Trade official who has been acting in connection with the inquiry of the Parliamentary Committee on Explosive Oils, I predict that the committee will recommend the raising of the test point to 105 deg. Abel. Before the committee last adjourned it was rumoured that they were prepared to recommend 100 degs., but I now hear that this point is felt to be insufficient, and the higher test approved. The committee's report will be presented early in the Session. Only a little further evidence is desired."

If this be true, the Board of Trade deserves well of the public, and at the same time it ought not to be forgotten that it is to our own plain speaking, during the past three years, and to the trenchant articles in *The Star*, which alone amongst daily papers took the

trouble to investigate this, in every sense, "burning question," and last, but by no means least, to the able, scientific, and strong attitude of *The Chemical Trades Journal*, that the full iniquity of the 73 deg. flash-point has been made known.

To the credit of English journalism it may be said that even the American oil gang's millions have not enabled them—save in a couple of the very lowest journalistic quarters—to secure Press champions. We hope the flash-point will be raised to 105 degs. F., for it will close satisfactorily for the public a very shameful episode of how science can be bought, and Parliament can be hounded to do deeds dooming a person per day to be roasted alive.

SEWAGE FILTRATION IN A SMALL TOWN.

An interesting description of filter-beds of moderate capacity, constructed at a town in New Jersey, recently appeared in our American contemporary, *The Engineering Record*. These filter-beds are constructed to dispose of the sewage (about 20,000 gallons daily) of an improved residence district. They have been substituted for a system in use several years, which was constructed at small cost, and in which the liquid was conveyed from a receiving tank—where about half its solid matter was separated—through 500ft. of jointed pipe, discharging it finally into a mass of broken stone buried in the natural gravel. As it was believed that this arrangement would eventually become clogged up by the accumulation of slime, sediment, etc., it was decided to retain the old outlet in case of very severe winter weather and construct new beds for general use. There is no doubt as to the wisdom of retaining the old filter-beds for use in case of emergency, the arrangement being practically equivalent to the provision of a duplicate set of filter-beds. The scheme has been so designed, again, that additional filter-beds can be constructed so as to bring the total capacity up to 40,000 gallons daily, a necessary precaution where a rapid increase of population is anticipated. Continuing the description, the sewage enters the receiving tank, passing from one chamber to the other through openings in the partition wall, deposits the coarser part of the solid material suspended in it, and, instead of flowing off, as before, through a trench pipe, it rises through a stand pipe, and is discharged midway through the top and the bottom into an adjacent reservoir, which, when full, discharges through a syphon, thus intermittently flooding the filter-beds, from which sub-drains convey the clear effluent to a small running stream. The reservoir has brick walls and a concrete bottom, and it is covered by a flat roof of gin. flagstones laid on double rows of gin. rolled steel beams that are carried by steel cross girders. When the sewage rises in the tank to the tops of the syphon (about once in twenty-four hours) it flows through its long leg, which is sealed by the back water retained by the little dam in the bottom of the outlet chamber, exhausts the air, and puts the syphon in action. This empties the reservoir in about forty-five minutes. The carrier pipe terminates in a distributing manhole, where the sewage may be diverted into either of the two filter-beds at will. The filter-beds were made by simply removing the top soil and excavating and filling in the natural gravel bank only enough to make a level top service, and by building puddled side embankments.

MATURING SPIRIT.

THE great loss of alcohol and the enormous capital locked up and earning nothing during the years spirit is maturing have caused many inventors to try methods of cleaning raw whiskey of the impurities which only age has hitherto removed. No process, however, has

hitherto been found satisfactory, because, if the treatment removed the fusel oil it took away along with that much-maligned but little-understood substance so much of the alcohol as to be ruinous. A process which has been investigated by Mr. A. H. Allen, ex-president of the Society of Public Analysts; by Sir Charles A. Cameron, and Mr. C. Estcourt, public analyst for Manchester, consists of exposing the largest surfaces of spirit and air to each other by means of a spray, and under the influence of a temperature of about 32 deg. The air and spirit only come into contact once, and the low temperature at which the latter is maintained condenses it and prevents the operation resulting in the whiskey losing aroma or flavour and thereby being rendered what is known as "thin." There is very little loss of strength, about 1 to 1½ per cent., and the operation can be varied as required to suit different manufactures of whiskey. Time of working, about four or five hours, longer or shorter according to size of plant and quantity of spirit to be treated. The plant consists of ammonia compressor, condenser, refrigerator, and spray vessel, driven by steam.

We have ourselves seen the operation in full work, and the way in which the spirit is handled by the patentee would lead one to expect a great loss, so thoroughly is the atomising done. The loss, however, remains trivial, and the amylic air escape, which is led to some little distance from the plant, clearly shows by the sense of smell what is being taken from the spirit.

The enormous money saving this process effects will, no doubt, please distillers everywhere, and we should say that raw whiskey so cleaned and given six months in a sherry cask would be about identical with a whiskey of the same distillate which had six years in bond. As the loss in the latter may be even 12 per cent. plus loss of money lying idle, whilst the loss by the Scott process of cleaning the spirit is at the most 1½ per cent., the money value of the invention to distillers, etc., should be enormous, and it should also be a great boon to the excise. As it is not a method of "faking" spirit, but a scientific improvement on distillery methods, much as the Bessemer process was in steel making, we do not see how we would be justified in objecting to it any more than we would be in objecting to incandescent mantles because they improved the usable illuminating power of gas. The Scott process does not come within the definition of adulteration, of sophistication, or of the addition of anything objectionable to the spirit—it is a scientific advance in the removal of impurities, and, as such is of high value. A curious thing about the process is that whilst the amylic air escape gives in the case of raw new whiskey, strong, evidences of the elimination of fusel oil from the spirit, six years old whiskey subjected to the process is practically unaltered, which seems to show that the process merely does by scientific means in a few hours what nature does in four to six years.

CORRESPONDENCE.

IS LONDON SAFE?

To the Editor of FOOD AND SANITATION.

SIR,—In view of the terrible visitation of typhoid fever at Maidstone, aggravated through the omission of the local authority, from economical motives, to keep a continual watch upon the water supply of the town, the following extract from the *Walthamstow Guardian* of Friday last will be read with keen interest by all who have to do with the water in East London:—

"STRATFORD PETTY SESSIONS.

"BATHING IN A WATER COMPANY'S AQUEDUCT."

"Two young fellows named ——— and ———,

both of Walthamstow, were summoned for unlawfully bathing in an aqueduct belonging to the East London Waterworks Company, at Walthamstow. Mr. G. Munro Millar, who prosecuted on behalf of the company, said the company had had complaints of bathing in this particular aqueduct which supplies the company's reservoirs from the River Lea. The case having been proved, the defendants stated that hundreds of men bathed there every Sunday. The Chairman said that rather aggravated the matter, for the more bathers the more the contamination. It was a very bad case. Fined 5s., and 6s. costs each, or seven days in default."

The fact that hundreds of men and boys bathe in the water which is taken for the drinking purposes of East London ought to awaken all the authorities in the districts served by the company to the utmost vigilance. What has happened at Maidstone may happen at any moment in our teeming districts of London, and if any such outbreak should occur, what a terrible responsibility will fall upon the shoulders of those who fail to take a lesson from Maidstone's misfortune.

That the water in East London is not quite as satisfactory as could be desired, can be gleaned from the remarks recently made by the water company's own analysts—who, in commenting upon the London water supply for July said, "On some days, however, in the case of two of the Thames-derived waters, there has been an excess of microbes, and the water from the Lea has not all the time been up to its best standard."

An admission of this kind from the company's own experts is, combined with the Press notice I have quoted, sufficiently serious to warrant full attention being drawn to it.—I am, Sir, yours, etc.,

LEO TAYLOR, F.I.C.

Public Analyst for Hackney, etc.

Public Analysts' Laboratory,

31, Moorgate Street, London.

September 29, 1897.

IMPORTANT MILK DECISION.

To the Editor of FOOD AND SANITATION.

SIR,—Will you kindly allow me to make a few remarks upon the above case? I think we may learn one or two object-lessons from it. It shows us very plainly how reckless and indifferent dairymen are to their own interest; they are often mulcted in fines and weeks of serious trouble—many times simply through careless indifference—and some won't learn wisdom even by experience, which is a very dear school to learn in. In the interest of the trade I look upon it as a serious mishap when a dairyman is fined; the whole trade suffer in reputation, and it gives our enemies another opportunity to scream out, "Crucify them!" In this interest I feel almost compelled to say a word or two of warning to those honest, but negligent, dairymen who treat those necessary precautions, which alone will stand their true friend in time of trouble, with such profound indifference. They should be like those Wise Virgins with their lamps ready trimmed; and whether the time was long or short, they would be always ready to prove they were honest tradesmen. The adulteration Acts are sharp-edged tools to play with—at least, without some risk. You may be an honest tradesman, perfectly free from even the appearance of evil, unimpeachable in character, but this goes a very little way in a milk prosecution. You may be all this, but a very bad tailor or shoe-maker, which would, of course, simply mean failure; and the dairyman who neglects to take those prudent precautions, which are absolutely necessary for his defence in any milk prosecution, is most certainly a bad workman, and one who brings disgrace upon the whole trade and leaves an open tract for infamous coercion Bills. Combination is the only word for the dairymen; intelligently worked it should give good security to its members at a nominal cost.

The dairyman should never lose sight of his own dependent position, and how difficult it is under the most favourable circumstance to prove he sold his milk in the same condition as he received it; but unless he can do this to the satisfaction of the magistrates he will be placed in the like position as the defendant in this case. A properly-worded contract is a safe document to have, and would be very good evidence in any County Court proceedings, but could not be relied upon as a defence in a milk prosecution. Of course it could be produced with a view to mitigation of penalties as having taken proper care in making a contract for milk. A printed warranty, signed by the consignee, with the words, "Warranted genuine new milk, with all its cream on." This form of warranty has been accepted by the magistrates, and would, I think, be quite safe in using them, and should be sent with every consignment of milk, properly dated and attached to every can.

I think it both a foolish and unpardonable offence for a dairyman to neglect to have the sample of milk left by the inspector analysed, and as soon as possible. Without this procedure there is no check upon the public analyst's certificate; without this there can be no appeal to Somerset House chemists. A sample of the farmer's milk should be taken from the farmer's can at the place of delivery, in the presence of a reliable witness, and the same should be analysed.

If summoned, he should request the medical officer to take an official sample of the farmer's milk. Armed with a legal warranty and certificate of the farmer's milk, no medical officer would refuse, but what they do not like is to be sent on a wild goose chase and told wicked lies. This procedure would not be expensive, and, carefully carried out, will sometimes prevent unjust prosecutions.

Sheriff Martin's summing was very careful, but the defendant in the case had really no defence, and perhaps this was the cause of the sheriff's remarks. He said: I think, warranty or no warranty, the defendant is liable to be convicted, simply by being the vendor of an article which was not of the nature and substance demanded by the purchaser, but if the defendant had provided himself with a warranty, and could have proved that his milk supply was sophisticated before he received it, I think the 25th Clause of the Sale of Food and Drugs Act would have protected him.

It is a fact beyond dispute that all dairymen found with adulterated milk in their possession are not all adulterators. These men have been placed in this false position purely through circumstances over which they have no control. Then, I contend, it is quite as much the duty of the Law to protect these innocent men as it is to protect the public, and this can only be effectually done when each food inspector can trace adulterated milk to its source.—Yours, &c.,

ROBERT EDGE.

THE KING OF THE BELGIANS ON SEWAGE DISPOSAL.

IN a conversation with Mr. Kirley, Sanitary Inspector, Bristol, on the occasion of the recent visit of the Sanitary Inspectors' Association to Belgium, His Majesty asked: "What do you do with your sewage?" "I could only say," proceeds Mr. Kirley's report, "that it was sent to sea as quickly as possible *via* the tidal river." His reply to that was, "Ah! I see, as usual, trying to poison the sea!"

His Majesty's remarks might be taken to heart by the London County Council, who are perpetuating London's costly and ignorant system of sewage disposal. Why poison the sea, and why waste thousands of pounds on chemicals? If certain of the County Council's great men had any interest, other than the sale of chemicals, they would cease to poison the sea and waste public money wickedly and ignorantly, for they could make the sewage treatment not only pay for itself but yield a profit. We should not be surprised

if H.M. of the Belgians abandons the Congo as a money-making scheme and avails himself of the opportunity of making millions nearer home.

IRISH EGGS.

A MEETING of the wholesale merchants in Liverpool, dealing in Irish eggs, has been held to consider the serious condition at which the trade has arrived. The speakers referred to the bad quality in which eggs are received from Ireland owing to the length of time they are kept before being despatched to market. It was stated that so numerous have the complaints of customers become that shopkeepers decline now to take Irish eggs, and buy either Canadian or Continental in preference.

A BACTERIA FOR BUTTER COMPANIES.

"WHILE it is true that bacteria have been utilised to some slight extent for the production of a good flavour in dairy products for some time past, it is but recently that the micro-organisms have been grown especially for this purpose, and have become a commercial article in the produce trade, and that thousands of dollarsworth of this artificial 'starter' in the making of butter and cheese has been sold yearly in all parts of the world.

"The headquarters for the dissemination of these bacteria is in this city, where a company has been organised with a capital of 100,000 dols., and is doing a flourishing business, from all accounts, in this unique line of trade. Already many large dairy companies in all parts of this country, in Canada, in the British Isles, and even as far away as Australia, may be found among the patrons of this highly enterprising corporation, and the shipment of culture tubes of the desired germs is reported to be a matter of large interest to the produce trade.

"It is claimed that these bacteria produce a uniform flavour in butter, so that the popular 'June' flavour may be secured at any time of the year, and that by the same agency the flavour of cheese is regulated to suit the fancy of the consumer," so says the *Medical News*, New York.

A MANURE ADULTERATION PROSECUTION AT LAST.

STAFFORDSHIRE is fortunate in having within its borders so talented a man, so able a lawyer, and so level-headed a citizen as Mr. Neville, stipendiary magistrate.

At the County Petty Sessions at Lichfield, Margaret Catherine Ginster, Frank Ginster, and Rudolph Ginster, trading as M. C. Ginster and Sons, patent manure manufacturers, of Erdington, were summoned at the instance of the Staffordshire County Council, for selling to Mr. N. C. A. Neville, stipendiary magistrate, two tons and ten cwt. turnip manure for use as a fertiliser on June 7, and also ten cwt. of the same on July 5, and for unlawfully failing, without reasonable excuse, to give on or before, or as soon as possible after delivery, an invoice setting forth the name of the article, whether it was an artificially compounded article or not, and what was at least the percentage of the nitrogen, soluble and insoluble phosphates and potash, if any, contained in the said manure. Mr. Fisher (instructed by Mr. Hutchinson, from the office of the clerk of the Staffordshire County Council) appeared for the prosecution, and Mr. Vachell (instructed by Messrs. Buller and Cross, Birmingham) for the defendants. The proceedings were taken under the Agricultural Fertilisers and Feeding Stuffs Act, 1893. It was shown for the

prosecution that the defendants sold patent manure at from £6 10s. to £7 10s. per ton, the same being advertised as composed of fish, blood, horn, hoofs, flesh, bones, and other animal matter, and with a trace of flour, of which some were dissolved and some were undissolved. No invoices were sent with the loads to Mr. Neville's farm at Shenstone House, where the manure was used, and a formal application was made by the bailiff for the analysis. Thereupon a statement was forwarded for the first load showing the manure to contain ammonia, $5\frac{1}{2}$ to $6\frac{1}{2}$ per cent.; phosphates, $5\frac{1}{2}$ to $6\frac{1}{2}$ per cent.; potash, 2 per cent.; and saying that the manure was a chemical property consisting substantially of animal matter. The whole of the first two and a half tons were used on the Shenstone House Farm, and Mr. Neville, not being satisfied with the result, ordered an additional half ton, notice being given to the defendants that samples of this would be submitted for analysis; and they were sent to the county analyst (Mr. E. W. T. Jones), who now stated that the substances were made up of blood and animal matters, mixed largely with shoddy, of which the outside value would be £3 per ton, and which, in his opinion, was not worth more than £2 per ton. It was, in fact, a very poor sample of manure—indeed, simply rubbish. For the defence it was contended by Mr. Vachell that Mr. Neville had previously used the manure, and had not made any complaints, and the best evidence of its utility was its popularity. The business had been carried on for twenty years with much success and with continually increasing sales. An analysis of the manures had been made early in the season by Mr. Alfred Simpson, analytical chemist, of London, but unfortunately had been lost by an agent at Aldridge, to whom it had been entrusted. The manure was rich in ammonia, but was sold as material which might be improved by the addition of phosphates, which could be procured at £2 to £2 10s. per ton—a much lower price than the manure itself could be supplied at. In reply to Mr. Fisher, Mr. Ginster, sen., who was called as a witness, said that he had the misfortune to be bankrupt twelve years ago, and that the business had since been carried on by his wife and sons, although he took an active part in the management. The second half-ton of manure was made up as a special order at the close of the season to oblige Mr. Neville, and it was not submitted to analysis by himself because sufficient time was not allowed. The Bench said that in their opinion two mistakes had been made by the defendants—one in giving the proper details of analysis, and the other in adulterating the manure to such an extent. They therefore imposed a fine of £2 and costs on each defendant for each offence. Mr. Fisher stated that the County Council had been put to at least 15 guineas expense, and applied for an order for special costs. This the Bench acceded to, and the justices' clerk stated that the full penalties and costs would amount to £11 6s. each, or a total of £33 18s.

We wish other buyers would, in the public interest, prosecute instead of accepting proposals for a settlement, because such arrangements encourage fraud.

THE SERIOUS CHARGE AGAINST A MANCHESTER BUTTER MERCHANT.

AT Manchester, on September 22, before Mr. F. J. Headlam, Stipendiary, there was resumed the hearing of the charge against Leonard Letter. The defendant, Leonard Letter, trading as Cohen and Company, butter and margarine merchants, Hangingditch, is charged with giving a false warranty in respect of butter sold to one, John Powell, a retail grocer, recently carrying on business in Oldham-road, and now a bankrupt. The facts disclosed last week were to the effect that on July 22 Inspector Houleston visited Powell's

shop and took a sample of what was labelled pure butter. On being analysed this was found to contain 80 per cent. of foreign fat and 20 per cent. of butter. Powell was summoned, and produced a warranty in respect of the butter signed by the defendant. Thereupon the case against Powell was dismissed. Mr. Jordon last week indicated the lines of the defence, to the effect that Powell was selling margarine as pure butter, and was shielding himself behind the warranty given by defendant in respect of other butter. Mr. Hudson, the Deputy Town Clerk, prosecuted, and Mr. E. Jordon, defended.

The defendant was now called, and said he had traded for many years in Manchester, and this was the first imputation on his trading. He received the kegs of butter that he sold to Powell from a dealer named Ryson. He sold it on commission. Ryson had asked him if he could place a lot of "inferior creamery butter." This was a term very well known in the trade, and it meant butter of an imperfect flavour. It was not margarine, but pure butter. He was quite justified in giving a guarantee that it was pure butter.

Cross-examined by Mr. Hudson, the witness said he was not aware that many complaints had been received in Manchester regarding samples of butter consigned from Holland, and that complaints had been made by the Board of Agriculture. He was perfectly certain that the sample which had been analysed was not taken from the kegs he sold to Powell.

Lewes Cohen, salesman, in the employ of the defendant, proved selling the butter to Powell. Powell tasted the butter, and if it had been margarine he could have told it. It was not difficult for anyone in the trade to tell the difference.

C. W. Johnson, a warehouseman in defendant's employ, said before sending off the kegs of butter he marked them. The writing on the keg produced was not his.

John Fazakerley, employed by a firm of margarine merchants, deposed that in July he sold Powell two kegs of margarine. He had also sold him a keg containing a mixture of margarine and butter.

Mr. Headlam said he believed that when Letter gave the warranty he did so innocently. As he had not a guilty mind, the case would be dismissed.

Mr. Jordon asked his Worship to give an expression of opinion on the merits of the case; but he declined to do so.

MUSTARD.

BARTHOLOMEW CROSSLEY, grocer, Westgate, was summoned before the Burnley magistrates on September 22 for selling adulterated mustard. The analysis showed that the package contained 82.95 per cent. of mustard and 17.15 per cent. of wheat flour. Defendant admitted that the mustard was adulterated, but said it was sold exactly as he received it.—Fined 10s. and costs.

THE WATER-AT-BEER-PRICE SWINDLE.

AT Westminster, on Sept. 25, James Benton, licensed victualler, of the Crown and Sceptre, Chapter street, Westminster, was summoned by the Excise authorities for diluting beer. A sample of stout taken from defendant's cellar was found on analysis to have been diluted to the extent of $5\frac{1}{2}$ gallons of water to the 36-gallon barrel.—The defence was that Mr. Benton had been unable through ill-health to personally supervise his business, which had been left to his son.—Mr. Dennis, who prosecuted, said in January last defendant was fined £25 and costs for a similar offence, and in July, 1895, he paid a penalty which, including costs, amounted to £9 14s.—Mr. Sheil: I shall fine him the full penalty now, £50, and 2s. 6d. costs, or in default of distress three months.

THE SHORT WEIGHT IN BREAD GAME.

At the Spelthorne Petty Sessions, at Staines, on September 27, Mr. John Yank, proprietor of the Hounslow Bakeries, Hounslow, was summoned at the instance of the Middlesex County Council for selling bread otherwise than by weight.—Mr. Walter Tyler, an inspector under the Weights and Measures Act, said he stopped a man named John Mirams, a carman in the employ of the defendant, at Hounslow, who was delivering bread from one of the defendant's carts. He asked him for a loaf of bread, and paid 2½d. for it. He also asked the carman to weigh it, but he refused, remarking that he never sold bread by weight. When the loaf was weighed it was found to be 2¼ oz. against the purchaser.—Mr. Sherwood, solicitor, appeared for the defendant, and urged that according to the Act it was not necessary for the seller to weigh bread unless the purchaser requested him to do so. The inspector asked for a loaf and he got a loaf.—The chairman (Mr. J. Ashby) to the carman: And what do you think is a loaf?—Mirams: Well, a loaf is a loaf, sir.—The chairman said it ought to be clearly understood that if a person asked for a quartern loaf he was entitled to receive 4 lbs. of bread, and if he asked for a half-quartern loaf he was entitled to receive 2 lbs. of bread.—The defendant was fined 10s. and 10s. 6d. costs.—Mr. Sherwood said the issue in this case was a very important one, as he still held that it was not necessary for bakers to weigh bread unless requested, and he asked the magistrates to state a case for the High Court.—The Bench consented.

At the same court, Mr. William Whiteley, "the Universal Provider," of Westbourne Park, was summoned "for that he, being a baker or seller of bread, did cause bread to be sold from a cart at Colnbrook without having in the cart a proper set of scales and weights for weighing the same," and the offence having been admitted the defendant was fined 10s.

A number of other cases were also disposed of and fines imposed, Inspector Tyler stating that the proceedings were taken in consequence of the recent rise in the price of bread.

Other districts might copy this action with benefit to the public.

MORE GOOD WORK BY MR. BILLING.

At Clerkenwell, on September 24, Harry Wills, butcher, of 60, Okehampton-street, St. Thomas, Exeter, was summoned for depositing, on August 26, at 93, Cowcross-street, Smithfield, for the purpose of sale, four quarters of beef which were unfit for the food of man.—Mr. Matthew Hale prosecuted on behalf of the Holborn District Board of Works.—The defendant pleaded guilty.—The beef was seized by Inspector Billing, sanitary officer, immediately it was delivered at the shop in Cowcross-street, and conveyed to Clerkenwell Police-court, where Mr. Horace Smith, the sitting magistrate, condemned it.—An examination of the meat proved that the bullock had suffered from tuberculosis.—The defendant told the magistrate that he saw the animal in Exeter while it was on its way to the railway station, and it then looked "very nice."—Mr. Fenwick ordered him to pay a fine of £10 and £7 10s. costs. In default of distress, one month's imprisonment.

WATER AT SPIRIT PRICE.

At Walsall, on September 15, Samuel Taylor, of the Bell Inn, the Green, Bloxwich, was charged with selling whiskey which was not of the quality and nature demanded by the purchaser.—The Town Clerk (Mr. J. R. Cooper) appeared in support of the charge, and Mr. H. H. Jackson for the defence.—The latter, on

behalf of his client, pleaded guilty.—The Town Clerk, in stating the case, said it was allowable to reduce whiskey 25 per cent. below proof, but in this case the liquor had been reduced to 33½ per cent. below proof.—Inspector Harries deposed that he went to the defendant's house and asked for gin. He was told there was none in the bar, and he then asked for some whiskey from one of several fancy bottles which were on the shelves. Mrs. Taylor did not wish him to have any from either of the bottles, but he insisted on being supplied, and the analysis showed that it was 33½ below proof, water having been added.—Mr. Jackson said the liquor in the fancy bottles was not intended for sale, and Mr. Harries would not have been supplied from that source if he had not insisted upon having some. The liquor having been supplied, however, the offence was complete.—A fine of 10s. and costs was imposed.

At Horsham adjourned Brewster Sessions the Clerk (Mr. A. W. Rawlinson) opened the proceedings by observing that at the previous sitting the renewal of 16 licences had been postponed in consequence of an objection having been made that in those houses diluted spirit notices had been exhibited. He had given each of the licence-holders notice of the objection, and he was informed that these notices complained of had all been withdrawn.—Mr. Boxall, barrister, who appeared for the Crawley and Horsham Licensed Victuallers' Association, said the licence-holders did not consider the matter of sufficient importance to contest it, and they had withdrawn the notices, which had been exhibited purely as a protective measure. These notices were actually authorised in terms, so far as the bottle trade was concerned, by the Food and Drugs Act, and they had been again and again before the Courts, and it had been held that where such a notice had been brought to the notice of the customer there could not be a conviction under the Act. Although the trade desired to accept the intimation from the Bench, he pointed out that the custom of exhibiting these notices had become prevalent throughout the country, and was done to protect the publican. Such a thing as pure spirits was never sold. The publican was entitled to sell brandy, whiskey, and rum 25 below proof, and gin 35, but the notice was exhibited to protect the publican in case of inadvertence, as a conviction for adulteration was a serious thing.—Sir Henry Harben (chairman of the Bench) said he had just come off a journey and asked for a glass of brandy, and was served with something that was 10 per cent. brandy and 90 per cent. water, and as one of the public, and not speaking as a magistrate, he thought that ought to be stopped. The amount of alcohol in the brandy supplied was only 10 per cent., and when the water was added there was practically no brandy left.—The licences were all renewed.

At the Shire Hall, Nottingham, Joseph Shelton, of Awsworth, licensed victualler, was summoned for selling, on July 30, gin which was unduly adulterated in contravention of the Act of Parliament. Colonel Story, inspector of weights and measures under the County Council, deposed that on July 30 he purchased a sample of gin at the defendant's house, and told defendant that he had bought it for the purposes of analysis. The sample was divided, as usual, into three parts. The analyst's report showed that the gin was 35 deg. under proof, the added water being 12 parts, which was in addition to the 35 parts allowed by the law. Mr. E. Williams appeared for the defendant, and said he was afraid his client was technically guilty, and all that he could ask for was a mitigation of punishment. Defendant had purchased a large quantity of gin about Christmas last, and he had reduced it in the proper manner, and with proper instruments, and had no knowledge whatever of the addition of extra water. Defendant gave evidence bearing out his solicitor's

statement. The Bench imposed a fine of three guineas.

At the Durham County Police-court, on September 22, Adam Waite was prosecuted by the County Inspector for having, at Bishop Middleham, sold whiskey adulterated to the extent of 42·49 degrees under proof.—Fined £1 and costs.

MRS. WATERS, proprietress of the Downham Arms, Downham-road, Islington, was summoned on Sept. 27 to the North London Police-court by the Vestry of Islington for selling Scotch whiskey which the analyst's certificate proved to be 26·3 below proof strength. The defendant did not appear, but her son elected that the case should be heard in her absence, and he would pay whatever penalty was inflicted.—Miss Penelope Clark said that at nine o'clock on the morning of the 4th inst. she went to the Downham Arms and purchased a pint of Scotch whiskey, for which she paid 2s. 8d. She handed this to Inspector Watson, and he at once declared the object of the purchase.—Mr. Alfred Paxman, the defendant's son, said he did all the "breaking down" of the spirits, and only operated upon this to the extent of 25 degrees. He handed in a notice which was stuck up in the bar, which said, "All spirits sold at this establishment are of the same superior quality as heretofore; but, to meet the requirements of the Food and Drugs Adulteration Act, they are now sold as diluted spirits. But no alcoholic strength guaranteed."—This notice, said the Inspector, was high up on the wall, and at the back of the customers making the purchase.—Mr. Paxman replied that it was placed in what was considered to be the most prominent place.—Mr. Dickinson: That would have been facing the customer. However, the adulteration was not great, and I will only fine the defendant 20s., and 12s. 6d. costs.

VINEGAR.

At Lanchester Petty Sessions, on September 16, John Smith, grocer and provision dealer, South Moor, was charged with selling malt vinegar, which was not of the quality and substance demanded.—Mr. Simey, clerk to the Durham County Council, appeared to prosecute, while Mr. Clark defended.—Mr. Simey explained that on June 4 the Council's inspector purchased a pint of malt vinegar at the defendant's shop for 3d. On being analysed it was found that the sample contained 94·41 per cent. of water, 4·21 acetic acid, ·98 solids or organic solids, ·40 mineral solids (·26 of salt). The compound parts of the article ought to be—93 per cent. of water, 4 of acetic acid, and 3 of solids. There was only a difference of $1\frac{1}{2}$ per cent. in quantity of water—they did not complain about that; there was not much difference in the acetic acid; but in the solids there was a large discrepancy—1·38 instead of 3 per cent. It was from the solids that the vinegar derived its flavour and pungency.—Mr. Stock stated that he was analyst for the County of Durham. He received the sample of vinegar from the inspector. It was what was known as the "16" vinegar, which denoted quality, but not strength. He was well versed in the compound parts of malt vinegar, and the result of his investigation was recorded in the figures on his certificate, which had been stated to the bench by Mr. Simey. In the sample he found an extraordinary amount of salt—·26. In his opinion the proportion of solids ought to have been 3 per cent.—Mr. Clark: You have had a great deal of experience in this sort of work? Yes.—Can you remember that in the year 1894 you had two cases in which your certificate was disputed?—Mr. Simey said he objected to Mr. Clark dragging into this case any other cases where the analyst's certificate had been disputed.—Mr. Clark: I am cross-examining your witness, and I have a perfect right to ask him such a question. I am now referring to a

case where Mr. Stock's figures were proved to be wrong. The Chairman: I don't see how we can object to the question. Mr. Clark: I am referring to a vinegar case tried at this court, brought here by the county. Your certificate was disputed at Somerset House?—Yes; but I still maintain they were wrong. I did not look upon the Somerset House decision as satisfactory. Did a letter not come to you from Somerset House giving you a definition of commercial malt vinegar?—Not to me, personally. Proceeding, witness stated that he was prepared to dispute the figures on the certificate given by the analyst for the defence. Mr. Clark, having read the certificate from Somerset House in respect to the sample that was to be tested by them in the last case tried at the court, Mr. Stock said he did not admit that the solids should be 2 per cent.; taking from the average of samples, it was nearer 3 per cent. than 2. Mr. Clark said he considered the best course to pursue was to send a sample of the vinegar to Somerset House, and have it tested. Mr. Simey said the results from Somerset House were not always satisfactory. The Chairman said it was impossible for them to know whether it was malt vinegar or not when Mr. Stock and his colleagues disagreed. Mr. Clark's contention was right, but he did not see what good it would do sending the sample to Somerset House. Mr. Clark: I am going to prove that it is malt vinegar. Mr. Clark quoted several well-known authorities as to what they considered should be the compound parts of malt vinegar, and Mr. Stock remarked that he was not bound to accept anyone's opinion. He found there was only 60 per cent. true malt vinegar. Mr. Allan, county analyst for the West Riding County of Yorkshire, said he had given a great deal of attention to the analysis of vinegar. He agreed that the solids should be $2\frac{1}{2}$, instead of $1\frac{1}{2}$ or 1·4 per cent. The quantity of salt described in the certificate would not come from the malt or maize. He considered it quite legitimate to add salt to flavour the vinegar, and quite proper for it to be manufactured from malt and unmalted grain. He considered the sample to be a moderate strength vinegar. By Mr. Simey: The quantity of salt was rather high. He had never found salt in any of his samples of vinegar. Mr. Clark maintained that their vinegar constituted a good commercial article. In the absence of any standard set up by the Act, there was really no case to answer. He had to call Mr. Dyer and Mr. Cresswell, of London, the manufacturer, who would tell them that the vinegar was composed of 60 per cent. of malted barley, and 40 per cent. of flax maize, and this would make an excellent vinegar. Both analysts agreed that it was perfectly legitimate, not only to use malt, but malt grain. There was no objection to the salt, and therefore he had no case to answer. They had sold nothing that was injurious to health. They had not in the least imposed on the public, and had supplied a first-class vinegar. If it was necessary, he would place Dr. Dyer in the box, and he would tell them what he thought about the vinegar. The Chairman, after conferring with his colleagues, said the case should never have been brought into court. They could not accept the opinion of Mr. Stock or Mr. Allen as to what constituted malt vinegar in the absence of any standard fixed by the Act of Parliament. The analysts of the various counties might themselves set up a standard, but that did not assume that there were not other vinegars equally as good in the market. Mr. Simey: The effect of this decision will be to stop the prosecution for malt vinegar. The Chairman: Not necessarily so. Mr. Clark applied for costs, which were allowed.

"TEMPERANCE" DRINKS.

At Rochdale, on September 17, Thomas Butterworth, shopkeeper, 44, Millstone-road, Rochdale, was

summoned for selling a bottle of "pop" and a bottle of "hop ale" on June 10 without having an Excise license.—Mr. Shepherd, a supervisor of the Inland Revenue, conducted the prosecution.—Mr. James Robins, analyst, stated that the half-pint bottle of "hop ale" sold by the defendant contained 3 7-10 per cent. of proof spirits, and the half-pint bottle of "pop," or gingerbeer, 2 9-10 per cent.—Mr. Ripley, who defended, said that the manufacturers had sold the "hop ale" and "pop" as temperance drinks to his client, who had re-sold them innocently as such.—One of the magistrates asked why was not the manufacturer prosecuted instead of the shopkeeper?—Mr. Shephard explained that the manufacturers were allowed to have 2 per cent. of spirits in these drinks, and they disposed of the drinks before the percentage got above that limit, but more alcohol became generated after that. Shopkeepers, if they could get a guarantee from the manufacturers, could take legal proceedings against them.—The magistrates imposed a fine of 10s. 6d. and costs.

THE SANITARY INSPECTOR AND THE PUBLICAN.

DAVID J. THOMPSON, of the Queen's Head, Basing-road, Peckham, was summoned at Lambeth on September 22, for obstructing Charles H. Kerslake, a sanitary inspector, in the service of the Camberwell Vestry.—Mr. G. W. Marsden, solicitor to the Vestry, appeared in support of the summons, and Mr. H. I. Sidney defended. The proceedings were taken under section 116 of the Public Health Act, which makes it an offence to obstruct an officer of a vestry whilst employed in the execution of the Act. Some drainage works are in progress at the defendant's premises, and are being carried out under the supervision of the vestry. Some little ill-feeling appears to have arisen over the work between Inspector Kerslake and the defendant, and Mr. Kerslake alleged that when he called at the defendant's premises on the 6th inst., with the medical officer the defendant admitted the latter but refused to admit him.—In cross-examination by Mr. Sidney the inspector denied that he had been particularly officious over this matter, but admitted that after refusing to admit him by the door through which the doctor had passed the defendant suggested that he should enter by another entrance.—Mr. Hopkins remarked that he did not think the Legislature contemplated that the police-courts should be troubled with rubbish of this sort, and dismissed the summons.

MILK.

At Clerkenwell the following defendants were summoned at the instance of the Islington Vestry:—

CHARLES JACKSON, of 17, Matilda-street, Barnsbury, was summoned for selling, on August 28, a pint of milk which was found, when analysed, to be adulterated with 10 per cent. of added water. A fine of 10s., and 12s. 6d. costs, was inflicted.

JOHN JENKINS, of 29, Twyford-street, Caledonian-road, was fined £5 and costs for selling a pint of milk adulterated with 18 per cent. of added water.

MARY SMITH, of 194, York-road, King's-cross-road, was fined 5s. and costs for selling milk adulterated with 5 per cent. of added water.

THOMAS EVANS, of 8, Randell's-road, sold milk adulterated with 13 per cent. of added water, and was fined 10s. and costs.

ADMIRAL FIELD, M.P., AGAIN.

ADMIRAL FIELD on cocoa was "prodigious" for folly. His latest freak gave Fareham amusement on September 27 at the Licensing Sessions.

At a previous sitting, Admiral Field, M.P., as chairman, had insisted upon the removal of advertisements from grocers' and other licensed premises. This decision has been much criticised, and has aroused considerable hostility. On Tuesday Mr. Deane, one of the senior magistrates, left the Bench with a colleague after addressing the Court to the effect that he differed on several points with the gallant admiral. He added that he believed a grocer or a licensed victualler had a perfect right, if he wished, to cover his house with advertisements from floor to ceiling, and that magistrates had no right to exercise their great powers to make them fall in with certain little fads which any of the bench might hold.

Perhaps the gallant admiral, expert in bogus cocoa, is also the hero of the following escapade:—

Some years ago there lived a magistrate who was detested by all the villagers on account of his arbitrary ways, both on and off the bench. Once this gentleman fell into a stream, and would have been drowned but for an old shepherd, who helped him out.

Magistrate: "How can I thank you? What shall I say?"

Shepherd: "Don't say anything—for Heaven's sake; for if our people know as I've pulled yo' out, they'll be wanting to chuck me in!"

MARGARINE.

JOSEPH ATKINS, Rickmansworth, was summoned at Watford Petty Sessions for not having a label fixed to a parcel of margarine, in accordance with the regulations, at Rickmansworth, on Sept. 3.

Defendant pleaded guilty.

Mr. W. G. Rushworth stated the facts of the case, which were to the effect that the margarine was sold to his assistant as butter. There was 85 per cent. of margarine and 15 of butter disclosed on analysis by Mr. A. E. Ekins, St. Albans Public Analyst.

Fined £2, including costs.

THE "PEARL" COCOA LABEL.

At Dudley, on September 22, Esther Wright, shopkeeper, Constitution Hill, Dudley, was charged under the Food and Drugs Act for selling cocoa not of the substance and quality demanded.—Mr. E. M. Warmington (Town Clerk), who prosecuted, said the analyst's certificate showed the cocoa to contain 33 per cent. of arrowroot. Pure cocoa cost 3s. 4d. per lb., and arrowroot 6d. per lb. On the packet produced were the words, in bold type, "Taylor Brothers' improved pearl cocoa." At the back were the instructions for using the cocoa, and on the side were the words, "This packet contains cocoa combined with other nutritious and wholesome ingredients requisite to produce perfect solubility, and is guaranteed in accordance with the Act, 38 and 39 Victoria, cap. 65." The words were not put on the packet so that they could be easily seen, nor were they in the same type as those on the front. Poor people were thereby not able to distinguish that they were buying cocoa mixed with other ingredients. It was the first case of the kind he had brought before the Bench, and his object was to make shopkeepers understand that labels must be unequivocally and plainly marked so that customers could see when the cocoa was mixed.—Mr. Fairbairn, for the defence, said the word "Pearl" was understood in the trade as meaning diluted. Mr. Garratt (magistrate) said the Act of Parliament appeared to have been complied with in the present case, but they wished to encourage any action that had a tendency to stop anything that might deceive the purchaser.—The case was withdrawn.

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(Signed) S. ARNAUD.”

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What it is not!

BOVRIL is not merely a Meat Extract containing only the stimulative without the nutritive constituents of Beef. With the ever increasing rush of Life, commercially and socially, there arose a demand for a stimulant without deleterious after-effects; hence the introduction of ordinary Meat Extracts, Meat Essences, &c. But stimulant without nourishment simply stirs up the Fire of Life without providing for its continuance, thereby exhausting the system; the result being precisely the same as if poker were solely depended on to FEED the household fires.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, OCTOBER 9TH, 1897.

THE "LIVERPOOL MERCURY" ON SOMERSET HOUSE.

KNOWING the humour of Liverpoolian writers, we grin broad grins over this little excerpt from that waggish journal, the *Liverpool Mercury*:—

"In these days of adulteration and falsification," says our fun-poking contemporary, "the analyst is one of the saviours of society, and it is largely through his efforts that we are delivered from buying butter, milk, and other foods which are not what they seem. In this excellent work Somerset House has led the way, and so

enormously have its labours increased that a new and enlarged home has become necessary for its chemical department. The Treasury has not been over generous in making the requisite provision, but, at some cost of appearances, the money has been so expended that the laboratory is, for its own special purposes, unequalled anywhere. Perhaps if the Chancellor of the Exchequer had reflected more carefully upon the uses to which the new building will be put, he would have been more disposed to be lavish. A material part of his revenue is obtained from beer and tobacco, both of which are examined at Somerset House in the final event; and it is a matter of history that to its officials are due the invention of a test for the quantity of malt in beer and other useful processes. If these considerations did not soften his heart, it is not likely that he would be moved by the utility of the Department to the public, strikingly demonstrated by the fact that over 64,000 samples were investigated last year; for Sir Michael Hicks-Beach is a severe economist except for party objects."

We were not amongst the "humbled" journalists who paraded the halls of the incompetent in the new laboratory. We have not a newer illustration handy at the moment than the following:—

SCHOOLMASTER (anybody), to Hero (Somerset House):
 "What is a lobster?"

SOMERSET HOUSE (ignorant, unwiped-nose urchin "dres't in a little brief authority"): "A red reptile that walks backwards."

SCHOOLMASTER: "An excellent answer, my prize stupid, but for three reasons. A lobster is not red, even though Victor Hugo called it 'the cardinal of the seas'; it is not 'a reptile;' and it does not 'walk backwards.'"

Anyone knowing Somerset House as we do must marvel at the stuffing put into the *Liverpool Mercury*. We are told Somerset House has "led the way in delivering us from buying butter, milk, and other foods which are not what they seem." Let us see how much truth lies here.

Beginning with BUTTER, the *real chief* of the Somerset House Laboratory—a gentleman who, although he virtually acts as an independent arbiter in adulteration questions, is himself directly concerned in the sale of food and drugs as the head of the Civil Service Stores, told a House of Commons Committee that: "The margin that is allowed is so wide that adulterators could take an ordinary butter of good quality and add to that a quantity of foreign fat, and in chemical composition it will correspond with genuine *bona fide* butter." (This was a question put by Mr. Yerburch, M.P., and answered on July 18, 1894.)

So much for the *Liverpool Mercury* and Somerset House butter, but as the Somerset House spokesman further stated they were unable to detect adulteration of margarine up to 18 per cent. or so, every Dane, Swede, German, Italian, etc., puts the margarine in, and it passes here as pure butter. No wonder "a new and enlarged home" is necessary. For England's sake it ought to be larger still. Molokoi, Klondike, or some place where "in this excellent work Somerset House could lead the way," would be less harmful than England. Our blandly beaming friend, the *Liverpool Mercury*, says further, in its waggishness, "beer and tobacco are examined at Somerset House." If the *Liverpool Mercury* editor walks along the line of docks and asks at any of a celebrated Liverpool brewer's tied houses for "a pint of dock wollopers" beer and the "key of the back door," he will suffer sufficient internal troubles to know better than thank Somerset House for its crime of sanctioning beer being made from rice, sugar, chemicals, etc., and degraded to "swipes." As to Somerset House and tobacco, may the Lord enlighten its ignorance for the revenue's sake. A Liverpool resident mixed "denatured snuff" (taken

out of bond duty free for hop-blight purposes) with genuine snuff waste and got in swindled duty from the Somerset House department thousands of pounds upon his knowledge of their ignorance. Custom House officials stopped the fraud, but only when they thrust the sophisticated stuff into a shovel, placed it on a fire and asked the Somerset House analysts if they had enough intelligence, not in their brain pans, but in their olfactory organs, to know what the smell of sulphur was. In addition to sulphur asafetida was present, but it was only comparatively small, so they did not smell it. Writing from memory and away from recorded figures, we are not sure of the quantity. It may have been 25 per cent. or 75 per cent., or only 5 per cent. Anyhow, the Somerset House laboratory scientists could not detect it, and their incapacity enabled a swindler to defraud the revenue of thousands of pounds.

In the words of our esteemed ancient, the *Liverpool Mercury*: "If these considerations do not soften his (Sir Michael Hicks Beach's) heart, it is not likely that he would be moved by the utility of the department to the public." We have no politics, save the plain desire of England being first.

We therefore hope Sir Michael will be adamant.

"The utility of the department" may be plainly and honestly stated thus: It has fostered fraud and protected its professors; it has thwarted English barley-growing and malting, and made beer into swipes; it has published to the world its own incompetence to analyse butter or anything, with the result that Denmark (gauging Somerset House ignorance) sends us butter containing quantities varying up to 18 per cent. margarine, which sells here at butter price. But the *Liverpool Mercury* may have been writ sarcastic.

MEDICAL OFFICERS OF HEALTH AND TINNED GOODS.

AT the Conference of Medical Officers, held at Leeds, recently, a subject of popular interest—that of "Poisoning from Canned Foods"—was introduced by Dr. J. Brown, medical officer of health for Bacup. From time to time, said Dr. Brown, the public became scared owing to reports in the daily Press of persons being poisoned by canned foods. Those interested in the trade believe that very few of those reports were true, and that a fatal case was very rare indeed, and that when one had occurred it had been through gross carelessness of the person in not using his senses of sight, taste, and smell. The interests involved were so important in regard to the extent of the business done and the enormous boon conferred upon the working classes in having cheap foods and cheap fruits, which if home grown would be luxuries for the rich only, that they necessitated a question of this kind being dealt with very guardedly. The canned food trade was an enormous one. Over 580,000 lbs. of such food, it was estimated, was consumed daily in this country. Tinned salmon was so popular that two million people ate it each day. One private firm in Liverpool had a turnover of more than twenty million cans per year. The American Bureau of Statistics showed that the exports from that country alone from June, 1895, to 1896, was 63,698,180 lbs., and during the following year 54,019,722 lbs. In passing through the streets of our cities and towns we saw the windows decorated with huge piles of canned foods. Indeed, this might be called the "Canned Food Age." (Laughter.) Dr. Brown proceeded to give particulars of a number of cases of poisoning from eating canned foods reported in medical journals since 1879, including six deaths from eating canned meats—beef, mutton, rabbits and tongues—and six from canned fish. In regard to canned meats, the poison was probably due to one of the ptomaines, which were of bacterial origin, and might have been produced—(1) Before the meat was

canned; (2) after canning; or (3) after opening. In the first case the toxic properties were probably rendered inert by the steaming process, but the nutritive value of the meat was lessened. In the second case the can was usually in the condition technically known as "blown," the gases produced by putrefaction causing so great an internal pressure that the ends were convex instead of concave. There was little danger in anyone consuming these, as the putrid condition and bad smell were manifest. After the cans were opened under certain conditions of the atmosphere the foods were rapidly acted upon by bacteria, which formed toxins, some of which were more dangerous than the mineral poisons. This was particularly so in regard to fish, salmon being the worst. It was only just to say that the wholesale and retail traders were most careful in examining all cans, and rejecting all those which were blown or pierced. This was in all probability the reason why the cases of poisoning were not more frequent. In canned fish ptomaines were the chief poison, salmon being the kind of fish which in nearly all cases had been associated with poisoning. From what one had read in the daily Press, and from physical conditions of some cans of salmon, it was probable that a good deal of it underwent putrefactive changes before being canned. The great canning firms would do well to take all necessary steps to ensure that all meats and fish were prepared and canned under the strictest hygienic conditions. In canned fruits the salts of tin and zinc had been the poisons. He was not aware of any case having ended fatally. The systems had been those usually associated with metallic poisons. From the analysis which he had made he found that cans in which lead was used in tinning or soldering, lead was present in the fruit and syrup, due firstly to the action of natural acids, and secondly to galvanic action. The amount of lead in some pears and apricots was such that in time it would produce plumbism, with its manifold symptoms. The amount of metal was sufficient to give the fruit a metallic taste, and at least one case had proved fatal. In meats, the metal was chiefly found where it was in contact with the soldering and plating. In fruits, it was present in the syrup, and also throughout the substance of the fruit. In the syrups, with but one or two exceptions, a certain amount of tin and lead, when "terne" plating had been used, had been present. Mr. Winter Blyth had examined over twenty cases of fruits and found tin in every one, the amount being from 1.58 to 11.05 grains per lb. All canned foods were better for being used soon after canning. How long foods hermetically sealed would keep was not definitely known. Having had canned foods, including meats, soups, rabbits, giblets, oysters, etc., of from twenty to thirty years old, he found that the tins, though rusty outside, were perfectly good inside; none were blown. The meats were sound, though not so fresh and tempting to the eye as recently canned foods. One family, consisting of seven persons, consumed over twenty cans, and another lot of 13 canned rabbits were partaken of by a club. In no case was any one made ill. In canned fruits the effect of age was of greater importance, as the acids of the fruits dissolved by chemical and galvanic action in the plating and solder. Now as to how these poisoning cases could be prevented. All the canning stations for meat, fish, and fruit should be under the control of such bye-laws of the sanitary authorities as would ensure that all the conditions necessary to the purity and soundness of the foods were enforced. In canned fruits it was very rarely one could detect any decayed fruit. The plating of the tins should be of pure tin, unless a satisfactory substitute could be discovered. In recent times the plating had seriously deteriorated, an alloy of tin and lead being used containing two parts of tin to one of lead, and in some instances even two parts of lead to one of tin. Severe competition had no doubt brought

about this serious deterioration, since tin plating cost £62 per ton, whilst lead cost only £14. All canned goods should be kept in a cool and dry place. Shop windows should not be filled to such an extent that the cans became heated. This was especially harmful in regard to tinned fruits, as alcoholic fermentation was set up. Fruits should be whole and unskinned, so that any metallic salt in the syrup would not saturate the fruit. Semi-lead or "terne" plating ought not to be permitted. Consumers should avoid cheap brands of canned foods. When the cans were opened the contents should at once be poured into a jar or vessel. In regard to canned fruits, pears and apricots had shown the largest amount of dissolved lead and tin, probably due to the large amount of acid in the juice of these fruits. Pine apples were the safest fruits to buy in cans. Fish, in a yellowish, soft, and friable condition — especially salmon — ought to be avoided. If the plating in the can was corroded, the contents of the tin should be thrown away. If it had a bluish slate colour and contained fruit it was also risky. He believed there should be a non-metallic coating for cans. Probably a light, cheap, and durable substance could be discovered in this connection. Aluminum seemed to offer a field for future research, as it could not be dissolved by the ordinary organic acids, but it should not be used in the soldering. He also called attention to a case made of celluloid. Asked what the Government should do in the matter, he urged that they should forbid the importation of canned foods in which the tin used for tin-plating contained more than 1 per cent. of lead or more than 10 per cent. of solder. This law had been in force in Germany since 1889. They should also provide that the soldering should be on the outside of the can. This regulation was enforced in France and Germany. In one recent can, Dr. Brown added parenthetically, he found over 40 grains of solder among the fruit. The Government should also enact that the date of canning should be legibly stamped on each can. This was very important in regard to fruits. It had been proved by Professor Gautier, of Paris, that the amount of metal dissolved increased with keeping.

Dr. J. F. J. Sykes remarked that most persons could tell them of cases in which they or their relatives and friends had suffered from sickness through eating tinned foods. But the right way to approach the question was to have regard not to the number of deaths, but rather the universal experience of people. He did not think there was a medical officer of health in the country who had not known of cases of illness arising from tinned lobster or salmon. That was surely quite enough to show that some sort of regulation was required. If they could prove that tinned food were like Pandora's box, letting out elements not necessarily killing but certainly causing injury, and that the goddess of sickness was dancing a "can-can" over all these foods — (laughter) — he thought that was quite strong enough. To put their case into figures would weaken it; to state facts would make it appear that these were the only facts on which they depended. He thought that if a body of medical men, and especially medical officers of health, were to tell the Government that something must be done to control tinned foods, it would be unnecessary to bring forward concrete cases.

Dr. McKenzie thought that unless a period could be fixed beyond which it would be dangerous to eat tinned foods, there would be no advantage in putting the date on the tin.

Dr. H. Stott mentioned that some time ago his attention was called to a case in which a grocer had bought a quantity of cheap sardines from America. There was a peculiar taste in the oil in which they were packed, the county analyst discovered the presence of cotton seed oil, and expressed his opinion that there was as much as three grains of lead in each ounce of oil. The grocer said never in the whole

course of his experience had it been known to the trade that sardines were packed in cotton seed oil.

Dr. Carson observed that even when the meats were apparently quite good, they sometimes produced very evil effects. Whilst he was in Africa there was an epidemic among the cattle, and the native population had to subsist on tinned meats. The rate of mortality doubled.

Dr. Pilkington (Preston) thought it was unfair to attribute all cases of illness after eating tinned food to the fact that it was tinned. The same results might have occurred if the meat had been fresh. How often, for instance, after Corporation dinners many people suffered the following morning — (laughter) — and it was almost invariably attributed to the salmon. (Laughter.) So much of our food supply was now imported from America and the Colonies that the question became a very important one. There was no doubt a glass vessel was very superior on account not only of its cleanliness, but because it enabled the purchaser to see the food for himself.

Dr. Walters pointed out that tinned milk was very largely used. This fact specially interested him, because there was a large amount of zymotic mortality among children from diarrhoea in his district. Although the children died very quickly from zymotic or summer diarrhoea, yet the fact remained that they had lived upon tinned milk.

Dr. Brown, in replying on the discussion, agreed that all the cases of illness attributed to tinned food were not due to it; but if half the cases reported occurred, it was a very serious matter. He was unable to fix a period of safety in eating tinned foods. In his opinion canned meat might perhaps be kept from one to three or four years, but as a rule the sooner it was eaten the better. But in regard to fruit, he was decidedly of opinion that it should be eaten the same season. In answer to a question as to whether bad food could be detected by its appearance, he said that in one of the worst outbreaks the food (tongue) was apparently perfectly sound and good. In some cases the meat was not necessarily bad in smell or appearance.

At this junction Dr. Brown proposes a resolution recommending the Council of the Sanitary Institute to urge the Government to prescribe measures with regard to canned foods in accordance with the suggestions which he had put forward in his paper.

Dr. Mitchell Wilson (Doncaster) asked the Conference to be careful, before making any recommendation, that they had good evidence behind them to justify such a recommendation. He was bound to say the evidence was somewhat contradictory. They had the fact that there was no illness due to canned milk, and that there was little or no evidence due to canned fruits. He moved as an amendment that the Government should be recommended to inquire into the subject, and to issue such precautions as on the evidence were warranted.

Dr. Bond (Gloucester) urged that though a decided case had been made out in favour of the necessity of inquiring into the matter it would be extremely unwise to commit themselves to any definite proposals until the subject had been thoroughly threshed out. They had to deal with a large and powerful interest, which would be sure to adopt all the means in its power to resist anything like Governmental control, and it would therefore be necessary for them to make a very strong case before the Government would take action.

Ultimately Dr. Brown agreed to accept the following resolution, which was unanimously accepted:—

"In view of the evidence submitted to this Conference of Medical Officers of Health, held in connection with the Congress of the Sanitary Institute at Leeds, they recommend the Council of the Institute to urge the Government to inquire into the prevalence of cases of illness due to the use of canned foods, and to adopt such action as the evidence would justify."

MARRIAGE OF INSPECTOR RANDERSON.

OUR many readers who know Mr. Randerson will wish him every good luck on his marriage, which took place on Sept. 16 at the Water-street Wesleyan Chapel, Skipton, by the Rev. J. Gilbert, of Longeaton (lately of Skipton), to Miss Sarah M. Mattock, third daughter of Mr. William Mattock, Skipton. The bride was given away by her father, and attended by Miss A. Hartley and Miss Alice Mattock (sister), bridesmaids; while Mr. Harry Mattock acted as groomsmen. After the wedding breakfast, served at the house of the bride's father, Mr. and Mrs. Randerson left by the 11.50 a.m. train for Bridlington, where the honeymoon is being spent. Many handsome presents were received, and among those sent to the bridegroom was a beautiful timepiece in walnut and oak, bearing the following inscription:—"Presented to Mr. A. Randerson by the Skipton Division of Police, on his marriage, Sept. 16, 1897."

SEWAGE PURIFICATION AND DISPOSAL.

AT the Leeds Sanitary Congress half-a-dozen papers were read relating to the purification and general treatment of sewage. The first was by Mr. W. Kaye Parry, M.A. In emphasising the scientific value of Mr. Adeney's researches, he remarked that Mr. Adeney was the first chemist who ever suggested that sewage could be purified through the action of micro-organisms by adding sufficient quantities of nitrate of soda to the liquid. This method had been tested on a large and practical scale with the most encouraging results. The quantity of nitrate of soda depended on the strength of the sewage, but it need never be wasted, because the organisms would never use it if they could do without it. It had been found that the quantities required were so small that the cost of the treatment was very moderate indeed. The value of manganese compounds as precipitants was also seen in connection with sewage sludge. This sludge, when it contained oxides of manganese derived from the precipitant, was absolutely inodorous, relatively small in quantity, and easily air-dried.

A joint production on "The Scientific Basis of Sewage Treatment," by Mr. W. J. Dibden, F.C.S., and Mr. George Thudichum, F.C.S., was presented by the former. It stated that in the recognition of the fact that all processes of sewage purification must be made subservient to the requirements of the various micro-organisms lay the whole secret of success. All sterilising or antiseptic agents must be rigorously excluded, a condition of neutrality or slight alkalinity must be maintained, oxygen, anyhow in the final stages, must be freely supplied, the temperature must be kept above the freezing-point of water, and the amount of food must

be proportioned to the powers of the organisms. So far as the working out of the principles put forward were concerned, the authors confidently stated that no previous chemical treatment was required; secondly, no sludge was produced, thereby removing the chief difficulty hitherto met with, and thirdly, the quality of the final effluent could be controlled, admitting, as it did, of being brought to any required degree of purity. Just as the conditions relating to the supply of air must be under efficient control, so must the quantity of organic matter in the form of sewage be regulated to the requirements of the organisms. Thus, the number of times the bacteria beds could be charged with sewage, consistent with good and continuous work, would depend upon the quantity of solid matter in the sewage; as it might be supposed that when the organisms were present to a maximum extent permissible with good work, their powers for the destruction of these would be limited, and if they were fed beyond that point they would grow beyond the capability of the water to supply them with oxygen, and putrefaction would result.

Dr. Sydney Barwise followed with an exhaustive essay on the principles of sewage purification.

Professor A. Bostock Hill, M.D., D.Ph., contributed a paper on "Filtration of Sewage Through Coal." Coal, he said, appears to have a special power of removing the putrescent organic matter from the sewage. The effluent from a coal filter was bright and free from odour. This medium of filtration was cheap and easily obtained.

Other papers were contributed by Mr. Donald Cameron, city surveyor of Exeter, on "A Year's Experience of the Septic Tank System of Sewage Disposal at Exeter"; by Mr. E. J. Silcock, on "Storm-Water in Relation to Sewage Purification"; and by Dr. G. V. Poore, on "The Treatment of Domestic Slop-Water in Isolated Houses."

Discussion followed on the whole of the papers. Mr. Roechling argued that the best and most natural mode of sewage treatment was the treatment on land. In the case of many sewage farms which had proved a failure, it was the management and not the system that was at fault.—Councillor Baker (Maidstone) regretted to say that there was great difficulty in getting the Local Government Board to sanction loans unless they adopted land filtration.—Dr. Woodhead thought that they had not yet arrived at such a stage that they could say that artificial filters could take the place of the river or of the sewage farm. The biological filters carried out the primary step of breaking down organic matter and bringing it into solution. But they might look forward to a time when these filters might under certain conditions do the whole of the work.—Mr. W. G. Larkins observed that in many West Riding towns they had to deal with refuse from dye works containing indigo and logwood, and a large proportion of solid matter. Had there ever been discovered a microbe

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ANALYTICAL REPORTS.

"The Laboratory, Bow and Bromley Institute, London, E. I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average."

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skillful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S., Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London."

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PACKETS, 6d., TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8.

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These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

that could eat indigo or logwood? (Laughter.) Many of the trade effluents were black, heavy, and solid, and he did not think that any septic system could render such sewage odourless, or deal in a satisfactory way with the solid matter.

Other gentlemen took part in the discussion, and at the close a vote of thanks was accorded to the President.

LONDON'S SEWAGE AND A WOEFUL WASTE OF MONEY.

THE annual report of the Main Drainage Committee of the London County Council just issued gives the following table, showing the quantities of crude sewage treated, chemicals used in precipitation, and sludge produced, as well as the quantity of refuse intercepted at the gratings at the outfall works at Barking and Crossness during the past year:—

| | |
|--|----------------------|
| Sewage treated | 78,395,394,000 gals. |
| Lime used | 20,334 tons. |
| Proto-sulphate of iron used... .. | 4,718 tons. |
| Sludge produced | 2,184,500 tons. |
| Average per week | 42,010 tons. |
| Refuse intercepted at gratings | 4,594 tons. |

For the purpose of precipitation-operations contracts were entered into during the year for the supply of 23,000 tons of lime at 11s. 7d. per ton, and 5,250 tons of pro-sulphate of iron at 21s. 3d. per ton.

Why does not the L.C.C. investigate the question of separating the solid excreta, drying it and selling it as manure. It would not cost 5s. per ton to dry, and would sell for 50s. to 65s. per ton—a plain, sensible, practicable method of saving chemicals, steamers and ocean pollutions. Dr. Farquaharson, M.P., wisely said the other day at the Leeds Sanitary Congress:—

“The difficulties of water-borne sewage will have to be vigorously faced some day; and I agree with Dr. Poore in hoping that the manurial wealth annually squandered and rendered useless by copious dilution and anti-septic admixture may some day be utilised for the good of the earth as effectually on a large scale as he has shown it can be on a small. As for the rubbish of the dust-bin, cremation is the remedy for that, and the prejudice of localities against destructors may be lessened by the successful experiments lately inaugurated by Lord Kelvin in the East-End of London, where the heat from burning refuse was utilised for the production of electric lighting.”

The London County Council has done much to merit the thanks of Londoners, but in sewage treatment it is hopelessly muddled. It could make a profit of many thousands of pounds out of what is at present a costly nuisance.

SHAREHOLDERS IN “MUNYON'S” AND OTHER QUACKERIES, BEWARE.

MR. WOOTON ISAACSON, M.P., intends to bring in a Bill that “all patent and proprietary medicines and all such chemical compounds as are used for remedial purposes shall have an exact analysis of the contents of each bottle, parcel, or box, as the case may be, distinctly stated outside, either on the label or printed on the receptacle which contains the article.”

This is a step in the right direction, but a more effectual way would be to compel a guinea stamp to be affixed to each package of the trash. There would be fewer fools then found to waste money on Munyon, Beecham, etc.

COCOA AS IT IS AND AS LECTURERS REPRESENT IT.

LYOYD'S newspaper, October 3, says:—“In connection with the Grocers' Exhibition now being held at the Agricultural Hall, Dr. Goodfellow, the official analyst to the exhibition, gave an interesting lecture, yesterday, on cocoa as a food beverage in comparison with tea and coffee. Adulteration of this popular beverage is now, it seems, a thing of the past, so lovers of cocoa and chocolate may drink in comfort. Although not so stimulating as tea and coffee, cocoa has 50 per cent. more assimilable qualities; consequently, as a food and a restorative of exhaustive energy, is more valuable. By the aid of a lantern, some slides were shown, explaining the different methods used when cocoa was adulterated, and their methods of detection.”

Without any lantern or slides, but solely by the aid of an inspector and public analyst, the Isle of Wight magistrates were on September 25 favoured with some facts about cocoa as it is. These facts seem to show that Dr. John Goodfellow does not know what he is talking about when he says cocoa adulteration is now a thing of the past, but that does not really matter. He is not the first “official analyst” who has occupied a like position, and the necessity of holding a candle to the devil of homœopathic and other cocoa adulteration, excuses in the business sense such statements—i.e., in case Dr. John Goodfellow has never seen presentations at court such as these:—

Edward Henry Guess, grocer, Shanklin, was summoned for selling adulterated cocoa. Police-Sergeant King purchased three-quarters of a pound of loose cocoa for 6d. at defendant's shop. The public analyst reported that the sample contained only sixteen parts of cocoa, the remainder being equal parts of sugar and arrowroot. The chairman said this was a bad case. It was nothing less than a fraud to sell as cocoa that which only contained sixteen parts. Defendant would be fined £4 and costs 19s. 6d.—Arthur Nobbs, Ventnor, was similarly summoned. Police-Sergeant King said the defendant, who was in the employ of Messrs. Way and Co., served him with three-quarters of a pound of loose cocoa for 6d. When he asked the defendant to divide it for the purpose of analysis, defendant said it was not pure cocoa, but chocolate powder, and wished to take it back. The public analyst reported that the sample contained 8 per cent. of cocoa, 68 per cent. of sugar, and 24 per cent. of arrowroot. Mr. Drew, who defended, asked the sergeant if he expected to get pure cocoa for 8d. per lb. He replied that he was prepared to pay 10d. a lb. if asked. The magistrates imposed an equal fine and costs as in the last case.

COFFEE.

AT Bristol, on Sept. 27, Mr. Alfred James Phippen was summoned for selling coffee containing 65 per cent. of chicory. The public analyst certified that he found it to contain 35 per cent. of coffee and 65 per cent. of chicory. This meant, said the prosecuting solicitor, a gigantic fraud upon the customers of the defendant, who, being poor persons, could least afford to be imposed upon. There was no label upon the wrapper which contained the mixture. The defendant pleaded guilty, and remarked that when the customer came to his shop he was out of half-pound wrappers, which, like the one now produced, contained a statement that what was wrapped in it was a mixture of chicory and coffee. Sixpence was a low price to pay for half a pound of coffee, in fact, people could not expect to get coffee at that price. The Magistrates stated that the defendant should inform his customers of the nature of the article that was being sold them. He would be fined £3 and costs, to include witness's fee.

WATER AT SPIRIT PRICE.

At Maryport, John Dockray Holliday, the Swan Inn, Ellenborough, was summoned for selling a pint of whiskey 5 per cent. under the legal standard on September 6.

Mr. E. W. Lightfoot appeared for the defence.

Inspector Irving said that he purchased a pint of whiskey to be sent to the analyst. He paid 2s. for it, and divided it up to three portions, leaving one and taking the other two away.

The Clerk then read the certificate from the County Analyst, which stated that the whiskey contained nothing injurious to health, but that it was 30 degrees under proof, which was 5 degrees below the legal limit.

Mr. Lightfoot, who pleaded guilty, said he was not going to dispute the analysis. It would, no doubt, be perfectly true, as the analyst said, that the whiskey had 5 per cent. water too much. That might or might not be a bad thing; it depended upon the point of view they looked at it. (Laughter.) At all events, it was so. On the day in question, the cart had called for empties when defendant was away, and his wife, who did not know so much about the matter as her husband, found an open jar of whiskey. This she put into a keg in the bar and added the requisite amount of water, but, no doubt, as the jar had been open, a certain amount of the strength of the whiskey had been lost. Defendant bore an unblemished character, and was a most respectable man.

Defendant, in answer to a question, said he had been two years in the public-house.

The Chairman said they thought a mistake had been made, and that it was not the defendant's practice to adulterate the whiskey. They had decided to fine him 28s., including costs.

At Horncastle, James Thomas Ransome, licensed victualler, Thornton-le-Fen, was summoned by Superintendent Rippin for selling adulterated whiskey. The certificate of the County Analyst showed that the spirit was made up of 63 parts of whiskey and 37 parts of water, and was therefore, 12 degrees below the legal limit.—The magistrates decided to hear another somewhat similar case that was to be brought before them before giving their decision.—In the second case the defendant was Ann Goodwin, licensed victualler, of Langrville, who was summoned for selling whiskey and gin which was adulterated. Similar evidence to that in the foregoing case was given by Supt. Rippin, who produced certificates from the County Analyst. These showed that the "whiskey" was composed of 68 parts of whiskey and 32 parts water, whilst the "gin" was 60·3 parts gin, and 39·7 parts water, or seven degrees under the legal limit.—When the Bench had agreed upon their decisions, they fined Ransome 10s. and ordered him to pay the costs 15s. Goodwin was fined 5s., and ordered to pay the costs, 15s., in each case, the fines and costs for the two offences amounting to £2.

At Horsham, John Masters, landlord of the St. Leonard's Hotel, Horsham, was summoned under the Food and Drugs Act, for selling a quantity of Scotch whiskey which had been adulterated.—Henry Gregory, a lad, stated that he was sent to the hotel on September 17 by Sergeant Suter, to purchase half-a-pint of Scotch whiskey. He did so, and paid 1s. 4d. for it. When he got the whiskey the sergeant came in, and he handed him the bottle.—In reply to the defendant, the witness said Mrs. Masters, when she served him, said she thought there had been vinegar in the bottle. He did not know whether there had been vinegar in it or not, but it looked clean.—Sergeant Suter deposed to taking the whiskey from the boy, dividing it into three parts, one of which he left with the defendant and the other two with the superintendent. The bottle in which the whiskey was supplied had been thoroughly rinsed with

hot and cold water.—Superintendent Byrne produced the certificate of Dr. Hehner, public analyst, showing that the sample submitted was 27·8 under proof, which was 2·8 under that prescribed.—In reply to the Bench, the witness stated that a "diluted" notice had been exhibited in the house, but was withdrawn some time ago.—Defendant, who said he supposed the whiskey must have evaporated, as it was taken from a bottle from which he sold small quantities, was fined 2s. 6d. and costs.—Superintendent Byrne stated that on August 23 a sample was purchased at this house at the time a diluted notice was exhibited. That sample was sent to the public analyst, and his certificate was that the sample was 41·8 degrees, or nearly half proof strength. In consequence of the notice being exhibited, they were unable to take proceedings; but when the notice was withdrawn he was directed by the Chief Constable to obtain another sample, and then took proceedings.

At the Moot Hall Police Court, Newcastle, on October 2, Wm. Wardehaugh, of the Engine Inn, Walker Gate, was charged with selling adulterated whiskey.

Mr. T. J. Forster, who was for the defence, said at the outset that the defendant pleaded guilty. The law allowed adulteration to the extent of 25 per cent. in respect of whiskey, and 35 in respect of gin. His client, he continued, had been in the house for 20 years. On the day in question the daughter of Mr. Wardehaugh was in the place. She was unaccustomed to the business, and indeed was not in it at all. She had filled up a cask of whiskey in the bar, and a larger cask in the cellar, without measuring the water. This she had done in total ignorance of the requirements of the law.

The Chairman (Mr. Rowell): That does not exonerate.

Mr. Forster: It does not, but it extenuates. It is the first offence.

Mr. N. Bewick: It may be the first offence brought before the court, but it may not be the first offence really.

Mr. Forster said they were charged for an offence on a particular day, and to keep in view that offence only was the judicial way of looking at it.

No evidence was given, and the Bench inflicted a fine of £2, but decided not to endorse the license.

Later, at the same court, James Eunson was charged with selling adulterated gin.

Superintendent Spratt said that on August 30 he visited the Mill Stone Inn, Low Gosforth, the house of the defendant, and purchased a pint of gin, paying 2s. for it. Defendant at first said he did not think he had sufficient, but, indicating a jar of it, witness asked him to try that. He then ran the pint out of it. The Public Analyst's certificate stated that the gin contained 51 per cent. of water, whereas the law only allowed 35 per cent. It was a very bad case.

In reply to the Chairman the defendant said he had not been in the place long.

Mr. Parsons, for the defence, said the offence was not intentional. The gin had been placed in a nine-gallon keg—a gallon of it. The keg had previously been in water, and it was probable that that had accounted for the presence of so much water in it.

Eunson went into the box, and denied that he hesitated when the officer asked him for the gin. In reply to the superintendent, he said he would swear that the keg held more than one gallon. It held nine.

The Bench decided to impose a fine of 40s. The Chairman (Mr. Welford) said this leniency was due to the fact that the defendant had not been long in the house, and might be ignorant as to the requirements of the law. They would not endorse his license, but advised him to be careful as to his future conduct.

At Penrhyn on September 29, Richard Abraham, of the Miners' Arms Inn, Perranwell, was fined 30s. in

clusive, for selling adulterated brandy to Police-Superintendent Beare.

At Ilminster, Robert Warfield, landlord of the Bell Inn, Broadway, was charged with having, on the 27th ult., sold whiskey 27 deg. under proof, or 2 deg. below that allowed by law. He pleaded guilty.—P.C. Pollard deposed that on the Friday morning in question he went to the Bell Inn, Broadway, and purchased a pint of whiskey for 2s. 8d. Defendant was present, but the spirit was supplied by his wife. Witness told them he was going to have the whiskey analysed by the public analyst, and divided it into three parts, which he sealed up. He left one with the defendant, and later in the day handed the others to Supt. Jennings. One of the latter was sent to the analyst and found to be under proof, and when he served the summons upon the defendant and told him the result of the analysis he replied that the reason of its weakness was that that was the last drop.—Defendant said the whiskey was kept in draught, and he was not aware until then that spirit would lose strength.—Supt. Jennings spoke to receiving the whiskey from the constable, and to sending one part to the County Analyst (Dr. H. J. Alford, of Taunton). He had since received a certificate of the analysis, which showed that the whiskey was 27 deg. under proof, while the limit allowed by law was 25 deg. Under the circumstances he did not desire to press the case, as the jar in which the spirit was kept would hold about five quarts, and when the defendant supplied this it emptied the jar.—Defendant said he was unaware that it was so low. There was not much sale for whiskey during the summer, and had he known it was under proof he would have attended to the matter.—The Bench cautioned the defendant and dismissed the case.

A PALPABLE WEAKNESS IN THE ADULTERATION ACTS.

THE law appears to be a very helpless and negligible quantity in cases of food adulteration, says the *Southampton Echo*. It almost justifies the rude strictures of Bumble. The law has been made to look like "a bass," indeed, at Manchester. In that city a retail vendor of "pure" butter was summoned because the butter was found to contain 80 per cent. of foreign fat. The accused produced a warranty. He declared that the wholesale firm with whom he dealt sold him thirteen kegs of the article, and made affirmation that it was pure in all respects. The retail merchant was let off. Then the law tried to incriminate the wholesale dealer. He successfully proved that he had no guilty knowledge of the adulteration. The law looks helplessly around now and stops further investigation. This species of mercy is all very well, but the customers are justified in making strong complaints about it. Had a fine been levied upon the retail dealer in the first instance there would have been some guarantee that the practice would be stopped. The retailer could have sued the wholesale firm for false warranty, and the wholesale firm would know well enough what to do with the original producer. As it is, there is a series of white-washings, and the customers remain unsatisfied and unavenged.

"OLEINE CHEESE AND NO-BUTTER BUTTER."

At Birmingham, Henry Harper, provision dealer, Newtown-row, trading as the International Trading Company, was summoned for selling cheese containing 30 per cent. of foreign fat, and "butter" containing 100 per cent. of foreign fat.—Mr. Hiley explained that defendant was the owner of a number of shops in the city, and the offences in each instance were committed by his servants. The cheese was sold at the shop in

Newtown-row, and the butter at a shop in Lodge-road. It was fair to defendant to state that purchases made at the other shops were found to be correct.—The defendant explained that the cheese was sent by him to the manager of the shop in Newtown-row with instructions to sell it as oleine cheese, and it was a mistake on the part of the shop assistant that the purchaser was not informed that it was oleine cheese. With regard to the charge at Lodge-road, the defendant pleaded that it arose through the mistake of an inexperienced assistant.—The Bench fined defendant £5 and costs in each case.

We do not know how butter can contain 100 per cent. of foreign fat. We thought it contained some water and salt, but as "Joe's" organ, the *Birmingham Daily Post*, says 100 is there, we say no more, or people might think we were untruthful.

MEAT.

At Glasgow, on September 30, Philip Mathieson, pig-dealer, 51, South-street, Elgin, was charged with having, on 15th ult., sent the diseased carcase of a pig to Glasgow for human consumption. He pleaded not guilty. Inspector Warnock, of the Sanitary Department, said that the accused got the pig from a neighbouring farmer on the understanding that he would bury it, but it was sent to Glasgow in accused name. The pig had suffered from tuberculosis. Inspector Young said that the carcase was seized at Buchanan-street Station. A butcher could easily have detected on the carcase the disease from which the animal had suffered. In reply to Procurator-Fiscal Neilson the witness said that any butcher who passed the carcase would be guilty of gross dereliction of duty. Mr. A. M. Trotter, M.R.C.V.S., described the condition of the carcase. Alexander Laing, the farmer who gave the pig to the accused, said he thanked Mathieson for taking the animal away. Accused did not tell him he was going to kill it and send the carcase to Glasgow. The Fiscal characterised it as the coolest and most impudent case he had ever had to lay before the Court, and asked his honour to send the accused to prison. Mr. Mitchell imposed a fine of £15, with the option of 60 days' imprisonment.

THE exposure of diseased meat is an offence of which the Leamington authorities are determined to make short shrift. Joseph Edwards, a Satchwell-street drover, offered part of a carcase of an animal which had been suffering from a wasting disease to a pork butcher. That pork butcher knew his business. He was not a purchaser, but when the inspector saw it he took a greater interest 'in the curiosity, and found it was well on the way to decomposition. Seeing that the Bench thought the case could only be met by three months' imprisonment, Leamington must be regarded as a safe place for the purchase of meat, says the *Birmingham Daily Mail*. True, the Bench deserve public thanks for offering such emphatic protection to the consumer. At the same time there is one feature of the case which smatters of unfairness. It was stated in court that Edwards had been into penal servitude. Surely it was enough to drag into court bad meat without ruthlessly dragging forth this unpleasant reminiscence, which has nothing whatever to do with the case? At times police and magistracy hug "previous records" a little too affectionately.

At Guildhall, London, on October 1, Henry Peake, 403, Central Fish Market, poultry dealer, was summoned for exposing for sale 52 fowls that we unfit for food.—Mr. Vickery prosecuted on behalf of the Commissioners of Sewers, and said these fowls were seized by Chief-Inspector Terrett. They were on defendant's board, and were marked 1s. and 1s. 6d. They were all

more or less in a state of decomposition.—Chief-Inspector Terrett gave evidence of the seizure, and said he saw the defendant on the following Monday. He then said he bought the fowls a few days before, and they were not so bad then.—The defendant, in reply, stated that it was a mistake on the part of his boy in putting them on the boards for sale.—The Alderman: It is a serious matter, and I shall impose a fine of £20 and costs; in default a month.

At Oldbury, on October 5, at the Police Court, Margaret Davies, butcher, Talbot-street, was summoned for exposing twenty-five pounds of beef, intended for human food, which was diseased and unwholesome, on July 10. Mr. J. Clarke prosecuted on behalf of the Oldbury District Council, and Mr. J. Sutton Sharpe defended.—Evidence was given by Mr. G. H. Robbins (sanitary inspector) and Dr. A. Cunningham (medical officer of health) that they visited defendant's premises and found the meat, which was pulpy and dark in colour, while upon being pressed a watery matter issued from it. The meat was condemned and destroyed.—For the defence, Mr. Sharpe produced a piece of meat taken from the same beast, which was, it was contended, wholesome. He urged that the meat was sound at the time it was seized. Defendant's husband called in Mr. Collett (veterinary surgeon) and Dr. Lawson to inspect the meat, but it had been destroyed. The gentlemen subsequently visited defendant's shop and examined a piece of meat taken from the same heifer.—Evidence was given in support of this statement.—The Bench considered the case proved, and fined defendant £8 os. 6d., including costs.

HOSPITAL MILK.

At Liverpool, on September 29, before Mr. Stewart, Robert Watson, milk-dealer, Rimrose-road, Bootle, appeared to a summons at the instance of the Sanitary Department of the Corporation for having supplied to the Stanley Hospital for new milk ten parts of water added to 100 of the poorest milk. Inspector Baker, who proved the case, said the defendant had been previously fined under the name of Robinson Watson, and in two other cases the summonses had been withdrawn on payment of costs. The Stipendiary, remarking that the case was a very serious one, the commodity supplied being intended to be both food and medicine, inflicted a fine of £10 and £1 costs. Some little time after the disposal of the case Mr. Sellars said he had been instructed in it. He asked for a mitigation of the penalty on the ground that the defendant's usual supply had not arrived from Preston, and that he had had to purchase in Bootle. The Stipendiary, pointing out that the inspector had been brought to the hospital in consequence of the quality of the milk having been suspected for some time, refused to mitigate the penalty.

MILK.

WILLIAM HARCOURT, employed at Mansville House Dairy, Hanwell, was summoned at Brentford, on September 30, by Inspector Tyler, the inspector under the Food and Drugs Act, for having refused to sell milk.—Mr. Tyler, in his evidence, said that on Sept. 20 he was at Hanwell, when he heard the defendant cry out "New milk" twice. Witness' assistant asked him for a pint of new milk, when he replied that he had none. Witness called his attention to the fact that he had called out new milk, and with a can which was labelled, "With all its cream." The defendant stated he had nothing but skimmed milk.—Mr. Greigson, Mr. Tyler's assistant, corroborated.—The defendant said he cried out "any milk," and not "new milk."—The

Chairman said that there was a doubt in the case, and the defendant was entitled to the benefit of it.—The case was accordingly dismissed.

ADULTERATION IN CAMBERWELL.

At Lambeth, on September 30, John Dale, of Acorn-street, Camberwell, was summoned by Inspector Kerslake, on behalf of the Camberwell Vestry, for selling margarine as butter.—Mr. Marsden, solicitor to the vestry, appeared in support of the summons, and Mr. Dallimore defended.—The defence raised was that the margarine was not represented as butter, and it was said that the defendant, although he had been in business for 18 years, had never had a complaint made against him before.—Mr. Hopkins fined the defendant 20s. and costs.—Geo. Fairhall, of Westmoreland-road, Walworth, was summoned for selling skim-milk containing 11 per cent of added water.—The defendant, who said he sold the milk in the same condition as he received it from the contractor, was fined 20s. and costs.—George Watkins, of Sultan-street, was fined 10s. and costs for exposing margarine for sale without having it properly labelled.

MARGARINE.

At Ormskirk, on October 1, Patrick J. Ellwood, shopkeeper, of Ormskirk, who was represented by his wife, was summoned under two informations under the Margarine Act for having exposed margarine for sale without using the prescribed wrapper. Mr. W. H. Parkinson, inspector under the Royal Lancashire Agricultural Society and the County Council, said he visited the shop on September 3, and asked for ½ lb. of the butter which Mrs. Ellwood said she sold at 10d. a pound. She weighed it, and when he called her attention to the lump upon which a margarine label was turned upside down, she then said it was margarine. He also pointed out that it was her duty to wrap the purchase in a wrapper upon which "Margarine" was printed. The public analyst's certificate of the analysis was to the effect that the stuff contained 10 per cent. of water and 80 per cent. of fats other than butter. Mrs. Ellwood had nothing to say, and the bench imposed a fine of 40s. and costs in each case.

CORRESPONDENCE.

THE EFFECTS OF IMPROVED SANITATION.

To the Editor of FOOD AND SANITATION.

SIR,—We have a remarkable confirmation of the effects of recent sanitary reforms in the quinquennial valuations of the many friendly societies that have been published for some time past. The valuations are based on the experiences of the Ancient Order of Foresters from 1870 to 1875, and in nearly every case the number of days' sickness per member in nearly all societies are very much in excess of what it was at that time, notwithstanding the fact that sanitary science has made vast strides since that period; and just in proportion as the sickness experienced is higher, so the death-rate is very much lower than for the aforementioned years. This has been a most perplexing fact to all those engaged in friendly society work. Sanitarians have done much to lengthen human life, but they have yet much to do to strengthen it. The mighty rush and high pressure at which most businesses are carried on nowadays may be considered as one of the factors that have burdened the friendly societies with so many sickness claims.—I am, &c.,

Dysart, Sept. 20.

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Food and Sanitation.

SATURDAY, OCTOBER 16TH, 1897.

LINCOLN IMITATES MAIDSTONE.

THOSE calm philosophers who bear other people's troubles without manifesting intense distress have been decrying outbreaks of alarm over the Maidstone epidemic, forgetting, perhaps, that it is only when some horrible examples occur that sanitary common-sense has a chance of a hearing, whilst philosophic uselessness is listened to all the year round. What has happened at Maidstone gives us an opportunity of noticing what may happen to Lincoln. A few days ago, at the Lincoln City Council meeting, a Mr. Pratt

said it had occurred to him that it would be a matter of satisfaction to the people of Lincoln if some public assurance were given by the Waterworks Department in the Council that proper precautions were taken with a view to prevent any mishap of a similar character to that at Maidstone, and he hoped someone was in a position to give them that assurance, that periodical and frequent analysis of the water were made. (Hear, hear.) There had been, he understood, a very important communication addressed to the Council on the matter by Dr. Harrison, the Medical Officer of Health. (A Councillor: It was read last night to the Sanitary Committee.) He (Mr. Pratt) hoped that Committee would have been in a position to give them some public assurance that every possible precaution was being taken with regard to the supply of Lincoln. His object was not to make any reflections upon the character of the water, but rather to elicit some statement to give confidence to the public, and he thought he had done so.—Mr. Goy said the matter would not be lost sight of. It could not be denied that there was room for improvement in their water supply—(hear, hear)—but when they took into consideration the enormous expenditure the city must be put to before they could get a proper supply, it had a tendency to make them hold their hands.—The matter then dropped.

We do not know what Dr. Harrison's report was, but we look at the discussion as reported in the *Lincolnshire Echo*. It says there is room for improvement, but the City Council must hold its hands on account of "the enormous expenditure the city must be put to before they could get a proper supply."

Human lives are jeopardised, disease and suffering may slay the bread-winner, the wife and children, and cause a city to be shunned as a plague-stricken spot. Lincoln must be at the chance of disease and ruin because of the "enormous expenditure" a pure water supply would entail, and its city fathers deliberately blind themselves to the fact that their "impure water supply" may any day cost them more than that enormous expenditure plus the sacrificed lives of inhabitants whose health is at their mercy.

But let us congratulate ourselves—we are the sanitary pioneers of the world, and like unto this of Lincoln, Maidstone and Worthing are our manifestations in hundreds of places.

PROFESSOR THORPE PROPOSES NEW REGULATIONS FOR MILK.

ACCORDING to the *Daily Telegraph*, Professor Thorpe, principal of the Somerset House Laboratory, is of opinion that the time has come for new standards and regulations with regard to the sale of milk, and that a system of grading should be introduced into it, a proposal which has, in fact, already gone forward to the Local Government Board. Thus, a first grade could be fixed very much higher than the present "official quality," and into it would come the produce of the well-bred, well-fed Shorthorn, Jersey, Devon, and the like. The second class would admit that poor but still genuine milk which was originally in view when the present low standard of quality was framed, and the third class would be avowedly "separated milk."

As Professor Thorpe was careful to show, there is no harm whatever in selling "separated milk" upon its merits, but it is only right and just that the public should know what it buys. For puddings and for many domestic uses it is quite available, though, of course, it is not nourishing for children, as even the country folk have found that pigs fed with it require also abundant meal. It is probable that its sale would at first be prejudiced by frankly calling it what is, but that argument was adduced concerning the compulsory labelling of margarine, which has now become a staple

among humble commodities. In the same way, "separated milk" would in due course be accepted, all the more as it can be sold for a penny or three-halfpence a quart. But twenty years ago, when the Act came into force, it was not known, and it seems only reasonable, therefore, to urge that an immediate extension of its scope and purpose, to take into recognition a factor of such wide possibilities, is imperatively wanted.

OYSTERS, JUSTICE, AND COMMON-SENSE "ON THE BOOZE!"

SOME few years ago we recollect the Bloomsbury County Court Judge made some very silly remarks to the effect that all actors were liars and degraded. At the time we felt inclined to administer a little wholesome advice to His County Courtship, such, for example, as Charles Matthews' rejoinder to a legal insult.

Charles Matthews was a witness, and the only creature who can obtain money under false pretences and evade imprisonment as a thief—to wit, a barrister—said:—

"What are you?"

"An actor," replied Matthews.

"Is not that a degrading calling?" the barrister asked.

"It may be," was Mathews' reply; "but it is less so than the one my father followed."

"Come, come, sir! That's impossible. What was your father?"

"A barrister!" was Matthews' innocent answer.

A burglar, "cly-faker," "snide-pitcher," or "thimble-rigger" who obtains money by false pretences does so with the wholesome dread of the policeman's hand upon his collar, with sessions and "sizes" to follow; but the barrister!!—he can take your money to plead, and spend it on Margate, the Riviera, or anywhere. He need not do the pleading for which he was paid; he can swindle the public—and he does. The curious thing about the filching is that when the rogues are promoted and sit in the High Courts honest people regard them with reverence.

The *Globe* says of the able, admirable, puissant, clean, well-fed, comfortably-salaried, and self-satisfied mirror of Justice at Bloomsbury:—"A case that positively bristled with surprises was heard in the Bloomsbury County-court yesterday. It was the case of a retailer of shell fish against a wholesale vendor at Billingsgate Market, in respect of a hamper of 300 oysters which proved to be, as plaintiff's wife remarked when she first became acquainted with them, 'a bit whiffy.' Plaintiff himself described them, with the exception of 'a few good uns on top,' as being 'fit to walk;' and when he exposed them on his stall a friendly policeman advised him to take them home, because, if he did not, they would 'crawl there themselves.' These vernacular excerpts from the evidence sufficiently establish the character of what Judge Bacon delicately described as 'these delicious bivalves;' and the first astounding fact is that such shell-fish could be exposed for sale in London without a melancholy sequence of coroners' inquests. The price of the oysters was five shillings for 300, or five a penny! Between the 'native' and the 'Portuguese,' to which variety the oysters in question belonged, there may be a wide hiatus of excellence; but can any difference in quality account for the degradation in value from four shillings to less than twopenny halfpenny a dozen? But the greatest surprise of the case was reserved to the last. It appeared that the jovial vendor of the bad oysters, when threatened with a lawsuit, had light-heartedly offered to give the plaintiff, if he won his case,

'two bob extry for a day's booze.' Plaintiff did win his case, and Judge Bacon then said: 'You had better go to him and get the two shillings he promised you for a drink.' The oysters may have been bad, but advice of this kind from the Bench, to get 'two bob extry for a day's booze,' is 'whiffy' indeed."

MORE OBJECT LESSONS IN THE WATER-AT-SPIRIT-PRICE BUSINESS.

At Ilminster Petty Sessions, Robert Warfield, landlord of the Bell Inn, Broadway, was summoned for selling whiskey which was not of the strength required by law.—P.C. Pollard stated that he purchased a pint of whiskey at the public-house in question, paying 2s. 8d. for it. He gave defendant a third of the whiskey back.—Supt. Jennings spoke to forwarding a sample of the spirit to the county analyst who certified it was 27 under proof—two per cent. more than it should be.—Defendant said this was the last whiskey in the jar, and he felt certain the spirit had evaporated.—The Bench considered the explanation satisfactory, and dismissed the summons.

At Todmorden Petty Sessions, Fred Hurst, landlord of the Rose and Crown Hotel, Castle-street, Todmorden, was summoned by the West Riding County Council for selling adulterated whiskey. Mr. Brutton, from the solicitor's office at Wakefield, prosecuted, and Mr. William Sager defended on behalf of the local Licensed Victuallers' Association. An inspector proved purchasing one shilling'sworth of Scotch whiskey from the defendant, and the county analyst's certificate showed it to be 1.4 deg. under proof. It was admitted to be the weakest case of adulteration in which the Council had ever prosecuted. The defence was that notices were exhibited stating that all spirits sold in the establishment were adulterated, no alcoholic strength being guaranteed. The inspector and his assistant swore positively that they saw no notice. Mr. Brutton characterised such notices as subterfuges for further adulterating spirits, 25 per cent. being already allowed by law. Licensing committees were refusing the renewal of licences where these notices were in use, and to hold them good was to open the door to great fraud. Ultimately, by a majority of the magistrates, the case was dismissed. Mr. Brutton asked for the findings of the Court, and the magistrates replied that they would state a case if requested.

FRANK STRANGE, of 196, Essex-road, was summoned before Mr. Horace Smith, for selling whiskey containing 100 per cent. of spirit of the strength of 26.8 degs. under proof. Mr. Bramall prosecuted on behalf of the Islington Vestry, and Mr. W. Ricketts, junr., appeared for the defendant. On September 11, a pint of Irish whiskey was purchased from the Three Brewers, Essex-road, for the purpose of analysis, and found to be 26.8 under proof by the public analyst. Mr. Ricketts raised a technical objection on the ground that the certificate of the public analyst was vague. He quoted the case of Newby v. Sims, in which the Judge decided that the analyst should state the exact amount of water found in the sample. The certificate presented by the Vestry in this case did not comply with that decision. It merely stated that the liquor was 26.8 degs. under proof. In support of this contention he also quoted the case of Fortune v. Hanson. Mr. Horace Smith upheld the contention, and dismissed the summons.

At Worksop, Wm. Wheeler was charged with selling gin not of the substance and quality demanded.—Mr. G. E. Garforth, Inspector under the Foods and Drugs Act, said that on September 14 he visited the Golden Ball, kept by the defendant, and asked for six pennyworth of gin. He had since had a sample of the

same analysed, and produced the certificate, which showed that the sample consisted of 82 parts of gin of 35 deg. under proof (the strength allowed by the law) and 18 parts of added water.—Mr. Warburton for the defence pleaded guilty, but explained that Mr. Wheeler being engaged at the time, asked his son to mix the gin. To bring it down to the strength allowed by the law he should have put in one quart and a quarter of a pint of water, but he put in a quart and a pint and three-quarters. Mr. Wheeler was as surprised as anybody when he learnt the facts, and he trusted under the circumstances the Bench would impose as small a fine as possible. Mr. Wheeler had no intention of defrauding his customers or anyone else—it was purely a mistake on the part of the son.—The Bench imposed a fine of £3 and costs.

At Nottingham, Harry Flowers, of the Commercial Inn, Beeston, was charged with selling adulterated whiskey on September 19. Col. Storey deposed to purchasing some whiskey from the defendant for the purpose of having it analysed. The analyst reported that the sample was 25 under proof, containing 5 per cent. added water. Defendant stated that he had not long had the whiskey, and stored it in a place where it was open to the air, and he thought that might be the cause of it being under proof. He was fined 20s.

At Carmarthen County Petty Sessions, on October 9, John Jones, landlord of the Square and Compass Inn, Pensarn, was fined 29s. 2d., inclusive, for selling adulterated whiskey.

COCA WINE.

At the South-Western London Police Court, Thomas Wood, chemist, of 14, The Parade, Tooting, was summoned, at the instance of the Inland Revenue authorities, for selling coca wine without a licence.—Mr. Alpe prosecuted.—Mr. Lynch, an Excise officer, stated that on May 24 he purchased a pint bottle of coca wine at the defendant's shop. On analysis the wine was found to contain 29·2 proof spirit.—Mr. Lane (warmly): In point of fact it is bought from chemists by women who have given way to drink. I have known it to be extensively used for that purpose.—The defendant produced a letter from the wholesale merchants, in which they admitted that the error was theirs.—Mr. Lane (after looking at the letter and the label on the bottle): Why do you sell the wine that has a plain label?—Defendant: There is a greater demand for it.—Mr. Lane: Precisely. That is in order to convey to people that it is not a nasty medicated thing, but a good drinkable wine.—A fine of £5 and costs was imposed.

UNSUSPECTED WHISKEY IN A "PATENT MEDICINE."

At Bow-street Police-court, on October 5, before Mr. Lushington, Joseph Wallace, homœopathic practitioner, of Albany-terrace, Regent's Park, appeared to four summonses charging him with selling a poisonous drug to a person not known to him, without inquiry, without labelling the article so sold as a poison or as alcohol, without entering the fact of such sale in a book.

It was stated that in June of this year a man went to the defendant's house and asked for a bottle of Wallace's Specific No. 1.

Though he was a stranger to the woman who served him, his name was not asked, no entry was made in a book, and there was no label affixed to the bottle to show that the contents were poisonous.

The bottle was taken to Dr. Luff, one of the analysts to the Home Office, who found that in one ounce of the liquid there was $\frac{1}{8}$ of a grain of aconitine, the most powerful alkaloid poison known, and the active principle of aconite.

The defendant had told a detective that there was something which counteracted the effects of the poison, and made use of several long names which witness could not recollect. Witness noticed that whiskey was one of the ingredients, and remarked that that was the only one that he knew anything about. (Loud laughter.)

The defence was a direct denial that the contents of this bottle were poisonous. Mr. Wallace believed he had discovered a method of neutralising the poisonous properties of aconitine, and would call persons who had taken a whole bottleful or more at one dose without ill effects.

The case was adjourned.

"SUBLIME" SALAD OIL.

THE Vestry of Islington (by Mr. A. M. Bramall, their solicitor), on October 1, prosecuted Ebenezer Tickner, a general shopkeeper, of Newington Green-road, Stoke Newington, for selling as olive oil an article which was entirely cotton-seed oil.

The case had been previously before the court, when Mr. D'Eyncourt dismissed the summons because it was held that olive oil was a "drug." Now the Vestry proceeded on the basis that the article is a "food," and asked for a penalty under the provisions of the Food and Drugs Act.

Miss Penelope Clark said she went to defendant's premises and asked for a pint of olive oil, and was served with a bottle upon which was a label, "Sublime Salad Oil."

The public analyst had certified that this was entirely cotton-seed oil; and Mr. Bramwell said this form of bottling was clearly an evasion of the Act, because the word "sublime" was only used in connection with the very best olive oil.

Miss Clark, in reply to Mr. Crocker, who defended, said she was sure she asked for "olive oil" and not for "salad oil." The defendant told her he had no olive on draught, but he had it in bottles. She did not notice the label "Sublime Salad Oil" when it was served to her.

John Metcalf, inspector under the Food and Drugs Act, corroborated this.

Mr. Thomas Dodds, olive oil importer, of Shoreditch, said that cotton-seed oil was about a quarter of the value of best olive oil. The word "sublime" was a description of an olive oil which had been used for centuries. The word "sublime" was not known in connection with cotton-seed oil.

Mr. Crocker submitted that the defendant did not sell this as olive oil, but as "salad oil."

By Mr. Bros: Cotton-seed oil is used as salad oil.

The defendant was sworn on his own behalf, and said that when he ordered the oil he ordered "salad oil," and he did not know whether he got olive oil or cotton-seed oil.

By Mr. Bramall: Did not buy this kind of oil because it was cheaper. He understood that it was a good salad oil. He did not know that this salad oil was imported in bottle as it was sold to Miss Clark.

Mr. Crocker submitted that there was no deliberate intention on the part of the defendant to defraud. Had he been asked for olive oil (which he denied) he would not have known better, because he had said he did not know what kind of oil was in the bottle.

Mr. Bros said there was a dispute as to what was asked for; and, taking all circumstances into consideration, would let him off on paying 17s. 6d. costs.

CHEWING GUM.

AN inquest was held at Lincoln on October 6 by the City Coroner (Mr. A. Trotter) on the body of Ethel

Mary Naylor, aged 7 years and 11 months, who had died suddenly the previous morning. Mr. Thomas Hughes was foreman of the jury.

The Coroner, in opening the inquiry, said the child, who lived with her parents in Gaunt-street, was taken ill on Friday last, and a doctor sent for. The doctor found symptoms pointing to peritonitis, which it had been suggested was caused or set up by some chewing gum of which the child had partaken. He (the Coroner) had caused a *post mortem* examination to be made, and the stomach could be presented for analysis if they desired. The father himself had pressed for an inquest, though he (the Coroner) believed that the medical men were prepared to grant a certificate in the ordinary course. It would be rather difficult to trace the particular chewing gum of which the child had partaken, and to say at what shop it had been obtained. One peculiar circumstance was that a few days before another child in the same house was found to be suffering from similar symptoms, but recovered. Still it was a case which should be thoroughly investigated. The jury having viewed the body, the following evidence was taken:—

Some pieces of chewing-gum similar to that eaten by deceased were handed round to the jury. Some of them were labelled "This is not to be eaten," and all "For chewing only."

The Coroner said many of the children would buy that could not read, and he should think every child, finding it sweet and attractive, would eat it.

A juror expressed the opinion that the stuff ought to be analysed.

Dr. Young, medical officer to the Oddfellows' Institution, deposed to attending the deceased. When the mother came to him first she said there was no need for him to visit, and he gave her full directions what to do. The father came to him the same evening, and said he thought the symptoms were those of poisoning. Witness then visited the child, which was feverish, the temperature being 103, and in great pain, with persistent vomiting. He prescribed for it, and on Sunday found that everything given it was rejected by the stomach. On Sunday evening the temperature was 103, and the pulse 147. The temperature dropped 7 degrees in the night, showing that collapse had set in. From this time it sank rapidly, and died the following morning. Witness and Dr. Powell made a *post mortem* examination the same day. The various organs were all healthy, until coming to the stomach, they found that it was in a state of great inflammation. It was practically empty, with the exception of about a tablespoonful of black liquid, exactly similar to the vomit. Undoubtedly death was due to acute peritonitis. The inflammation was something tremendous. That might be set up by a variety of causes, such as chill, irritant or corrosive poisoning, etc. The child was very delicate. In reply to the Coroner whether chewing gum would set up peritonitis in a delicate child, the witness replied that it would not, if not of a poisonous nature. He should not say for one moment that the wax had set up peritonitis.

The Coroner said, as he understood it, there were two kinds of analysis. If they could tell the analyst to look for a certain poison his task would be comparatively simple, but if he had to find an undefined poison the work would be long and expensive.

In reply to a juror, Dr. Young said he found no symptoms of any poison in the stomach.

The Coroner, in summing up, said it was for the jury to decide whether they would adjourn the inquiry for an analysis of the stomach and the gum, or return a verdict of death from peritonitis, with the addition that they were unable to say how that was set up. They could not, however suspicious they might be, say now that it was caused by the chewing gum. He (the Coroner) was of opinion that chewing gum was a very improper thing indeed to sell to young children—(hear,

hear)—and it only needed to be taken in one's hand to know what bad consequences might follow. He was quite sure such stuff ought to be condemned, whether it was the cause of death in this case or not. (Hear, hear.)

The Coroner's remarks were endorsed by the jury, who, after consultation alone, returned a verdict that death was due to peritonitis, of which they were unable to say the cause. At the same time the Foreman suggested they would like to say that, in their opinion, the sale of chewing gum should be strictly prohibited, and shopkeepers asked to refrain from selling it.

The Coroner quite agreed. It seemed absurd to him that a sweetmeat should be sold to children and labelled "Not to be eaten."

Inspector Bradley watched the proceedings under the Food and Drugs Act.

ST. JAMES'S, LONDON, AND ITS SANITARY STAFF.

A SPECIAL committee appointed to inquire into the duties and position of all vestry officials has reported that Mr. W. H. Watson (the chief sanitary inspector) and Mr. J. Flint (the caretaker of St. James's Dwellings) owned or were interested in tenement house property in the district, and expressed the opinion that it was incompatible with the satisfactory and efficient discharge of the duties of the holders of these offices that they should be interested in tenement property in the parish. The vestry, after consideration, adopted the committee's report, and decided to determine the engagement of the sanitary inspector and caretaker of St. James's Dwellings, with a view of making new engagements with any officers who could comply with the vestry's requirements.

ADULTERATION IN DERBYSHIRE.

MR. JOHN WHITE, F.I.C., public analyst to the County of Derby, reports that during the quarter ending September 20, 250 samples of food and drugs were submitted to him for analysis. The following list shows the nature of the articles submitted:—

Milk, 10; butter, 23; cheese, 7; lard, 9; tea, 7; coffee, 7; sugar, 4; flour, 4; oatmeal, 26; arrowroot, 10; ground rice, 4; pepper, 11; mustard, 9; ground ginger, 16; vinegar, 2; whiskey, 30; brandy, 2; rum, 21; gin, 7; sweets, 14; lemon juice, 1; linseed meal, 2; cream of tartar, 5; citrate of magnesia, 2; tartaric acid, 1; tincture of rhubarb, 11; tincture of lobelia, 1; precipitated sulphur, 1; spirit of nitrous ether, 1; olive oil, 2.

Only one sample of milk proved to be adulterated, and this contained 7 per cent of added water, and was also deficient of 10 per cent. of its natural fat. Owing to an unfortunate delay, however, in the service of the summons, the case was dismissed upon technical grounds on the application of the defendant.

One sample of butter contained a slightly excessive proportion of water, viz., 17·8 per cent. As this is below the standard fixed by you for prosecution, no proceedings followed.

One sample sold under the name of Caper Tea contained 5 per cent. of extraneous mineral matter, consisting of small stones, sand, etc. As all tea is examined at the Custom House when imported, adulterated samples of this article are of rare occurrence. In this instance the mineral matter was distributed so equally throughout the sample as to negative the possibility of its presence being due to accident. It is probable that the adulterant was introduced at the place of origin of the tea, though it is possible for it to have been added in this country; indeed, some years ago this practice was not unknown here, more especially in the case of packet teas.

One sample of oatmeal contained a small percentage of maize, much less in amount, however, than was present in the former samples in which I discovered this adulterant, and so placed it upon record for the first time.

Eight samples of spirits, viz., four of whiskey, two of rum, and one each of brandy and gin, were found to be of lower alcoholic strength than is required by the Act, the deficiency being, of course, due to the addition of an undue proportion of water. In only three instances was the deficiency sufficient to render proceedings advisable.

Of fourteen samples of various kinds of sweets submitted, one contained 4 per cent. of paraffin-wax; this compares favourably with the result for last quarter, when, in the same number of samples, three contained the wax. Although the fines inflicted in these cases have not been in any way severe, they have been accompanied by a decided intimation from the magistrates that future cases will be dealt with much more strictly. I believe these sweets will eventually be withdrawn from sale, and in that event the operation of the Sale of Food and Drugs Act will have done good work in this county, for I am strongly of opinion that the sale of sweetmeats containing this absolutely indigestible wax is a direct danger to the health of the younger portion of the community.

Of the 24 species of drugs submitted to me, four proved to be adulterated, inasmuch as they all failed to comply with the requirements of the British Pharmacopœia. These were three samples of tincture of rhubarb and one of tincture of lobelia. Two of the former were deficient in proof spirit to the extent respectively of 30 and 50 per cent.; the first contained 40 and the other 33 per cent. less solid ingredients than should have been present, while both were destitute of saffron, which is the most expensive ingredient.

The tincture of lobelia was entirely devoid of spirit, and could not therefore be properly described as a tincture.

The whole of the other articles were returned as genuine, though two samples of milk were of low quality, and three samples of oatmeal contained traces of barley meal. The total number of samples adulterated was 17, which calculates out to a percentage upon samples analysed of 6·8, as compared with 8·7, the figure for the previous quarter.

PASTEUR FILTRATION NEEDED AT WADEBRIDGE.

TYPHOID EPIDEMIC AT WADEBRIDGE.

THE joint committee of the St. Breock District and Parish Council met Dr. Buchanan, of the Local Government Board, on Oct. 2. Dr. Buchanan said he had been in the town three or four days, and had completed the local inquiry into the outbreak of typhoid fever, and it was at his suggestion that the members of the Provisional Committee had been asked to meet him. He had nothing new to tell as to the outbreak of the disease. He had before him extracts from Dr. Mackay's reports for the year 1890 and onwards, in which many warnings were given. Typhoid had broken out, and as far as he could gather there had been 59 cases of illness and 10 deaths directly attributable to this outbreak. Whole families had been affected and people had shunned the town.

The cause had been pointed out by the medical officer (Dr. Mackay) as defective water supply, bad drainage, and lack of scavenging. The St. Columb Board had repeatedly received warnings also from the Inspector of Nuisances, the County Council, and many of the inhabitants of Wadebridge.

The District Council had been thoroughly warned, and was therefore responsible in a very large measure for the present outbreak. Although a particular group

of wells in the neighbourhood was undoubtedly contaminated, it was not to be thought that all other wells were safe. From the character of the subsoil and the construction of the drains, many wells were obviously liable to pollution.

The St. Columb District Council was all the more responsible because it had petitioned against the separation of the Urban district. The present pressing need was for a clean and proper water supply. He feared that when the epidemic was over people would begin to feel the inconvenience of taking water round from door to door as now done, and there would be a demand for the opening of the public pumps. He thought it was clear that they should never open any of these public pumps again. The plea that the pumps might be unlocked so that the water might be used for washing purposes was proved to be a fatal one by the case of the so-called "Craig's Pump," which bore a notice, dated 1895, stating that the water was not fit for drinking, though the water from this pump had been used for drinking.

They must get a proper scheme for a water supply on foot, and at the earliest possible moment.

There was an old scheme prepared about three years ago. He was not in a position to say whether it would supply the whole town, but there had been no opposition to it on the ground that it was insufficient or unsatisfactory. If the matter were left for the new Urban District, the likelihood was that the scheme would not be carried out for some time, and, if not before next summer, there would be more typhoid.

Other matters might be attended to later on, but the question of the water supply was urgent.

LIVERPOOL CITY COUNCIL AND MILK FROM TUBERCULOUS COWS.

MR. SHELMEKDINE called attention to the proceedings of the committee relating to tuberculous milk. Some two months ago samples of milk were obtained from a milk dealer in the city for bacteriological examination. The examination proved that the samples were tuberculous, and thereupon the medical officer of health, having ascertained the dairies in Cheshire from which the milk had been sent to Liverpool, wrote to the medical officer for that county, who had reported that there were cows in these dairies in an affected state. Mr. Shelmerdine having called for the report of the Cheshire medical officer, which the Town Clerk read, asked why the committee had failed to take proceedings against the vendors of the milk. He moved that the matter be referred back, with instructions to the committee to prosecute.

Replying to questions on the subject, the Town Clerk said that in order to institute a prosecution under the Food and Drugs Act it was necessary to take three samples of the material to be analysed, one each being retained by the complainant and the defendant, and the third being submitted to the public analyst. In these instances that course was not followed, and a considerable time elapsed before the committee received the result of the bacteriologist's examination.

Alderman Smith expressed surprise that the committee who were so keen in stopping the sale of milk flavoured with Vyrnwy and Rivington Pike (laughter) did nothing in view of serious contamination. He urged that proceedings should be taken in order to test the powers possessed by the Corporation.

Colonel Morrison asked the Council not to be led away by a display of semi-political feeling against the Health Committee.

Alderman Smith said that the chairman of the committee knew that he (Alderman Smith) would not exhibit political feeling on a matter of this sort. But since Colonel Morrison had introduced politics, he

would like to ask if the milk dealer who sold the samples, and against whom no proceedings had been taken, was a Conservative? ("Oh, oh!")

Alderman Cookson asked the Council to leave the matter in the hands of the committee.

Dr. Commins thought the suggested prosecution would be monstrous.

Mr. Beloe asked who was responsible for the irregularity in the taking of the samples? It looked as if the committee were to blame for their manner of conducting the business.

The amendment was rejected, and the proceedings of the committee were passed.

MILK.

At West Ham, on October 6, Harry Raby, a farmer, of Blackmore, Ingatestone, Essex, was summoned by Dr. C. Sanders, medical officer of health for West Ham, for selling milk which on analysis proved to be adulterated with 6 per cent. of added water, and from which one-fifth of its cream had been abstracted; and there was a further summons against the defendant for selling the milk and giving a false warranty in writing to the Farmers' Co-operative Association, Limited.—On September 7 Inspector Crocker, of the Sanitary Department of West Ham, saw a churn of milk taken from a train at Forest Gate, consigned by the defendant to the Farmers' Co-operative Association, Limited. A sample of the milk was taken and sent for analysis, and it was certified that the sample was adulterated by the addition of 6 per cent. of added water, and that some of its cream had been abstracted. The defendant had an agreement with the consignees in which he undertook to supply genuine milk.—Mr. W. J. Gray, for the defence, called the defendant and two employees to prove that the milk was not touched when it was put on the railway, and he suggested that the churn had been tampered with between Ingatestone and Forest Gate.—Mr. Bagallay, dealing with the adulteration, said the defendant was responsible for it, and imposed a fine of 40s. and 29s. costs, Dr. Sanders then saying he would withdraw the other information, which related to the same sample of milk.

At the Town Hall, Bolton, on October 7, John Nicholson, farmer, Harwood, was summoned before the magistrates for selling impoverished milk.—Mr. A. F. Kidson, deputy town clerk, prosecuted, and stated that Inspector Spencer saw the defendant's son delivering milk in Bark-street on September 21, and he asked him for a pint of new milk, subsequently explaining that he wanted it for analysis, and going through the usual formalities.—The certificate of the public analyst showed 12 per cent. of added water.—Dr. Gould (medical officer of health and public analyst) stated that the lowest percentage of non-fatty solids it was possible to allow was 8.5, whereas the sample he analysed was 7.4.—Mr. Russell appeared in defence, and stated that the deficiency was not necessarily added water, but might be due to insufficient feeding or bad management. There was only an absence of 1.1 per cent. of non-fatty solids, which the analyst inferred was equivalent to 12 per cent. of added water. He then called George Nicholson to prove no water had been added.—The magistrates, however, were of opinion the case had been proved, and fined the defendant £5 and costs.

BORIC ACID IN MILK.

At Birmingham, on Oct. 8, Edwin Gill, wholesale milk dealer, 86, Kent-street, was summoned at the instance of Henry Jones, inspector under the Food and Drugs Act, for having delivered adulterated milk to Mrs. Wookey.—Mr. Hiley, from the Town Clerk's

office, appeared to prosecute, and Mr. Hasell defended.—Mr. Hiley said that on Sept. 26, at 9.30 p.m., defendant sold five gallons of milk to Mrs. Wookey. The inspector at the time took a sample, and submitted it for analysis to Dr. Hill, whose certificate showed that it contained 14 per cent. of added water and 20 grains of boric acid per gallon.—Jones, who gave evidence, was asked why he refused to take a sample from another churn when requested by the defendant, and said that the latter had been alone with the milk for a minute or two, and witness, therefore, did not feel justified in taking the sample.—Mr. Hasell, in defence, said that the milk had not been tampered with in the slightest degree by the defendant or his son. The latter fetched the milk from the station.—Defendant and his son swore that they had not added any water to the milk, and the former said that he had had reason to complain of milk being tampered with at the station when he had not been waiting there to receive it. He had tested it, and on one occasion had found as much as 40 per cent. of water in it.—The Bench said they were satisfied that the case had been made out, and fined defendant £10 and costs, or a month's imprisonment with hard labour.

BUTTER.

At Widnes, on October 7, William Bentley, grocer, of Lugsdale-road, Widnes, was summoned by Inspector Parkinson, of the Royal Lancashire Agricultural Society, for having, on the 7th ult., unlawfully sold three-quarters of a pound of butter which was not of the nature and quality demanded by the purchaser.—Inspector Parkinson stated that he called at the defendant's shop on the 7th ult. and purchased the butter from Mrs. Bentley. He told her it was required for analysis.—The analyst's report stated that the butter contained 11 per cent. of water and 60 per cent. of fats other than butter.—The defendant said he bought the butter from Thomas Carney as pure butter.—He was fined 10s. and costs.

POISONED BY TINNED LOBSTER.

At Blackheath, on October 9, an inquest was held on the body of Clara Green, aged thirty-four years, who died from ptomaine-poisoning, on Friday, at the Cherry Tree Inn. Mr. George Pullen, landlord of the Cherry Tree Inn, stated that the deceased, who was his sister-in-law, had been staying with him at Blackheath on a visit, and appeared in the best of health until last Monday evening, when she ate some tinned lobster for supper from the tin produced, the witness and his wife also eating some at the same time. The witness noticed no ill-effect from eating the lobster, but both his wife and the deceased were taken ill the following day, and the deceased complained of feeling as if she was going mad. The witness sent for a doctor, but before his arrival the deceased became unconscious and remained in the same state until her death on Friday at noon. The tin was then examined by the coroner and the jury, and two holes were found to have been soldered from the outside, and the coroner expressed the opinion that this had been done when the tin was hermetically sealed. Dr. Jonathan Becker deposed that he was called to the deceased and found her in a dying condition. She was unable to swallow, and he ordered injections. The tinned lobster was the only food taken that could account for the deceased's condition. The symptoms pointed to ptomaine-poisoning, and that the others who ate the lobster recovered could be explained by the fact that some persons' stomachs were more sensitive than others. The jury returned a verdict of Death from Ptomaine-poisoning, caused by eating tinned lobster, but added that the evidence failed to prove that any blame was attached to any one.

ALLEGED ADULTERATION OF LARD IN NOTTINGHAM.

ANALYSTS AT VARIANCE.

At a special sitting at the Guildhall, on October 5, the magistrates present being Mr. J. T. McCraith (chairman), and Mr. E. W. Enfield, George Fletcher, of Nos. 5 and 7, Eldon-street; John Benton, of 17, Southwell-road; John Wesson Camm, of 6, Hucknall-road, Carrington; and Samuel Bendall, of 131, Gordon-road, a provision dealer, were charged with selling adulterated lard.—Mr. Bellringer (Messrs. Bellringer and Cunliffe, solicitors, Liverpool) appeared on behalf of three defendants, and also represented the refiners of lard, Messrs. Fowler Bros., Limited, and Messrs. George Fowler, Son, and Co.—Mr. H. B. Clayton appeared for Camm, and Dr. Bottrill represented the original manufacturers of the lard.—Mr. H. W. Day (Town Clerk's office) said, in face of the certificates that had been received from Somerset House, he quite recognised that it was useless to go on with the prosecution. Immediately he heard the result of the analysis at Somerset House he communicated with the defendants' solicitors informing them that it was his intention at the adjourned hearing to ask their worships' permission to withdraw the summons.—Mr. Bellringer said he had attended similar prosecutions in various parts of the country, with the result that the lard had been pronounced pure after the analysis at Somerset House. He, therefore, asked that the Bench would grant special costs in the three cases for which he appeared. He asked them to consider what would have been the result if the three shopkeepers had not had the opportunity of submitting the lard for analysis. The certificate of the city analyst would have been conclusive evidence to the magistrates, who would have convicted the defendants if the lard had not been sent to Somerset House. In two cases the city analyst's certificate stated that the lard contained 25, and in another case 30 per cent. of beef stearine. There must have been gross negligence when such certificates were brought forward while other certificates stated that the lard was pure. In face of the evidence from Somerset House, his friend had taken a reasonable course in withdrawing the summonses. Somerset House had decided the matter, and decided that the allegations were false. He, therefore, asked the Bench, in justice to the defendants, to award them substantial costs for the injury which had been done to them and the expenses they had incurred.—Mr. Clayton said with regard to the case in which Mr. Camm was concerned, if the charge of adulteration had been proved, it was perfectly clear that the beef stearine had not been added by the defendant.—It was evident that the analyst's certificates were very unsatisfactory, and the Nottingham Bench should be cautious in the future before they accepted the city analyst's certificate.—Dr. Bottrill said, considering the course that events had taken, he desired to make a statement on behalf of the makers of the lard.—The chairman remarked that as the summonses had been withdrawn he did not think Dr. Bottrill's clients had anything to fear.—The Bench allowed the defendants in three of the cases £2 2s. each as costs against the Corporation.

COFFEE.

At Preston, on September 29, William Shimmell, shopkeeper in Wellington-road, was summoned for selling adulterated coffee.—The Town Clerk appeared for the prosecution; Mr. G. Ambler was for the defendant, who pleaded guilty.—William Baron, inspector of nuisances, said he went to the defendant's shop, 31, Wellington-road, in pursuance of instructions from Inspector Marsden, on August 25. He asked for half a pound of 1s. 4d. coffee, and he was served with it.

He then said he had purchased it for the purpose of analysis. The general price for pure coffee was 1s. 4d. per lb., as distinguished from a mixture. Cross-examined, the witness said he had bought other samples of coffee the same day at 1s. 4d., and they were all right. They were sent to the public analyst, and he sent a certificate showing that they were all right. He was served with the coffee by Maud Shimmell.—Inspector Marsden spoke to having followed the last witness into the shop, and he divided the packet into three parts for the purpose of analysis. The certificate of the public analyst was that the coffee contained 30 per cent. of chicory.—The Mayor: What was on the label?—Inspector Marsden: Nothing, sir.—Mr. Ambler said his instructions for the defence were that the Inspector entered the shop and found a girl 12 years of age there. She sold him the coffee. If defendant himself had been in the shop he would have told the Inspector that he could only sell him a mixture at 1s. 4d. The manufacturer who supplied defendant told him that he paid 1s. 3½d. per lb. for pure coffee wholesale. Defendant had kept the shop for years, and there was nothing against him before. He was very sorry that this had occurred.—The Mayor said that an offence had been committed in this case, but the Bench thought that there were extenuating circumstances, there being only a girl in the shop.—The Town Clerk said he should address the Bench. Mr. Ambler had made a statement without calling any evidence in support of it. He (the speaker) had no one to cross-examine. He hoped, therefore, the Bench would not act on the girl's evidence, as she had not been called.—Mr. Rideal: No, no. We feel that this is a respectable tradesman, and many people prefer coffee with a mixture of chicory.—Defendant was fined 2s. 6d. and costs.

At Retford, William Thursby, Misterton, was summoned for selling coffee which was not of the nature, quality, and substance demanded by the purchaser.—The case was proved by Inspector Garforth, of the Food and Drugs Act, who said that on August 11 he visited Mr. Thursby's shop at Misterton and purchased four pennyworth of coffee from his wife. The defendant was away. He told her that he was the Inspector under the Food and Drugs Act, and that he had purchased the coffee for the purpose of analysis. He divided it into three parts, gave one to Mrs. Thursby, sent one to the County Analyst, and kept the other himself. On September 8 he received the analyst's report, showing that there was 75 per cent. of coffee and 25 per cent. of chicory. He believed that Mrs. Thursby was not in the habit of selling in the shop. She got the coffee out of a canister behind the counter. Whether she was thoroughly acquainted with the matter or not he did not know, but he thought she was not. Still, she was the agent for the time being, and his attention was not drawn to the fact that it was a mixture of coffee and chicory.—The defendant said he was sorry that he was not at home. His wife gave the wrong coffee. They had pure coffee and a mixture of chicory and coffee, the former being 5d. and the latter 4d. per quarter of a lb. His wife, when asked for coffee, unfortunately gave the mixture.—The case was dismissed on the payment of 8s. 6d. costs.

COLMAN'S MUSTARD.

At Lurgan Petty Sessions, on October 5, a prosecution under the Sale of Food and Drugs Act was brought against William Jennings, by Sergeant Gallagher, inspector. Complainant said he visited the defendant's premises on the 24th ult., and asked to be supplied with six ounces of mustard. A shop assistant told him that they had none loose, and he purchased three penny cannisters. The contents of these he put together, and then divided into three parts, one of which he gave to

the assistant, one he kept, and the remaining one he sent to Professor Hodges for analysis. He had since received the certificate of analysis, which was to the effect that at least 10 of every 100 parts was farinaceous matter, and he now charged the defendant with selling mustard fraudulently adulterated to increase its bulk. In reply to Mr. Menary, who appeared for the defence, complainant said he did not produce the canisters, and he believed he had brought the case fairly before the Court. Mr. Menary then produced a canister of the mustard, which the complainant admitted was similar to those supplied to him by the defendant. This was, Mr. Menary stated, a penny canister of Colman's mustard, and it bore the following printed notice:—"Take notice, this preparation is an admixture of pure mustard with farina and choice condiments—Sale of Food and Drugs Act, 38 and 39 Vic., c. 63." Mr. Menary further stated that his instructions were that the complainant was offered pure mustard, but declined to take it, preferring the canisters, the notice upon which exempted them from the operation of the Act. The complainant said the notice would convey no information as to the quality of the contents of the canister to a person who was unable to read, and such person would believe it contained pure mustard. The Chairman said the magistrates unanimously dismissed the case.

At Burnley, on Oct. 6, Thomas Whitney, a grocer, was charged with selling adulterated mustard.—Inspector Williams said that he sent into defendant's shop for a quarter of a pound of mustard, and upon analysis it was found to contain 7.27 per cent. of wheaten flour. It was also in a dirty state.—Mr. Waddington (for the defence) objected to this, on the ground that they must be bound by the analysis.—P.C. Morris said that the defendant supplied him from a box under the counter, and gave no intimation of its being adulterated.—Mr. Waddington contended that most people preferred a mixture, but it was now mostly sold in tins. Mr. Whitney had not had any loose mustard for some time, and supplied the officer with that, as he had asked for it.—The defendant was ordered to pay costs, as the magistrates thought the offence unintentional.

CORRESPONDENCE.

PASTEUR FILTRATION REQUIRED AT FLUSHING.

To the Editor of FOOD AND SANITATION.

SIR, —Quite lately a notice board has been placed at a well by the side of Tregew-hill, close to Flushing, declaring the water to be unfit for domestic purpose and fit for cattle only. If the water is, as stated, unfit for domestic use, surely it is not fit for dairy cows, as typhoid is so often traced to the milk supply. The inquiry which led to the condemnation of this water was owing to a fatal case of typhoid—and that not the first case, I am told—within a few yards of the well. Why, then, was not the use of the water entirely prohibited?

CLAUDE FOSTER.

Flushing, Falmouth, Oct. 5.

THE DERBYSHIRE COUNTY COUNCIL'S PROPOSALS FOR THE SUPPRESSION OF ADULTERATION.

At a meeting of the Derbyshire County Council, on October 6, the following suggestions, made by the Weights and Measures Committee, were adopted:—

Your Committee have had under consideration the

provisions of the Sale of Food and Drugs (1897) Bill, which it is proposed to be construed as part of the Food and Drugs Act, 1875. The County Councils Association have asked for any suggestion that the Council may wish to make with regard thereto, and it is recommended that the following suggestions should be put before the Association with a view to them being discussed, and, if approved of, being brought to the notice of the Government when promoting this Bill.

(1.) That in the sale of milk, vessels or receptacles containing skimmed milk shall be labelled as such.

(2.) That inspectors be empowered to take samples of milk at any station or elsewhere during transit to purchasers.

(3.) That in future an invoice respecting the purchase of goods from the wholesale dealer shall in prosecutions against the retail dealer have the same effect as a warranty has at the present time.

(4.) That the production by a defendant in any case under the Food and Drugs Act of a certificate by a public analyst shall not be considered sufficient evidence of the facts therein stated unless seven days' notice has been given to the prosecutor of the intended production of such certificate.

(5.) That with regard to the sale of spirits, the posting up in a public-house of a general notice as to the strength and purity of such spirits shall be no defence in any proceedings taken for the adulteration thereof.

(6.) That no artificial colouring of margarine shall be allowed.

(7.) That the word "Food" shall include all articles intended to enter into or be used in the preparation or flavour of food.

(8.) That all drugs shall comply with the description, character, and tests set out in the "British Pharmacopœia."

(9.) That steps be taken for the formation of a Court of Reference, as recommended by the Food Products and Adulteration Committee that lately sat and reported their proceedings to Parliament.

ICHTHYOL FOR INSECT BITES.

COMPRESSES of moist earth, vinegar, cold water, etc., are all considered quite useless by Ottinger, who recommends as the only serviceable remedy for insect bites, moistening the bitten parts with ichthyol, or better still to apply a plaster of ichthyol. The author states that the popular ammonia is of no use for the purpose. —*Umschau*, i., 434.

TOXICITY OF PERSPIRATION.

ARLOING finds that when injected into animals human perspiration is always markedly toxic in its action. The lethal dose for a dog is about 15 C.c. per kilo. bodyweight. The secretion excited by hard exercise was distinctly more toxic than that produced by the action of sudorific drugs, or than the normal secretion. The symptoms produced by the injection are very marked and point to the presence of a powerful poison. —*Comptes rendus*, cxxv., 219.

PYRAMIDON.

UNDER this name a methyl derivative of antipyrine, in the form of a white powder, slightly less soluble than antipyrine itself, has been stated to have a greater therapeutic activity than that body, and its effects to be more lasting. Lépine is unable to confirm Tilehne's statement that it is much more active, but finds that it is slightly so. It does not diminish the quantity of the urine excreted, but in large doses increases it.—*Rev. de Thérap.*, cxxxii., 427.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, OCTOBER 23RD, 1897.

FOOD ADULTERATION.

A CHEMICAL AND BACTERIOLOGICAL EXAMINATION OF WATER, BEER, AND CHESAPEAKE BAY OYSTERS.

By JOHN C. HEMMETER, M.B., M.D., PHIL. D.
Professor, Medical Department, University of Maryland.

WE are taught that the Scriptural expression, "Therefore I say unto you, take no thought for your life, what ye shall eat nor what ye shall drink," is not to be taken literally.

In some foreign countries, experience has shown that it is safe to make chemical and bacteriological investigations and analysis of food.

In Maryland, almost all food products are so abundant and cheap that adulteration is too expensive, as a rule, and offers small temptation to unscrupulous dealers. In the entire United States the adulteration of foods is of comparatively little importance from any harmful influence it may have upon health.

In a recent report to the United States Department of Agriculture, Mr. J. A. Wedderburn places the percentage of all food products that are sold with adulteration at 15 per cent.; but only 2 per cent. is deleterious. Among the adulterations might be mentioned: gelatin with isinglass—powdered sugar with barium sulphate—mustard with flour and tumeric—distilled coloured vinegar, sold as cider vinegar—pickles with iron and copper—oleomargarine sold as butter—ground spices adulterated with cocoa-nut shells, rice, flour, and ashes (Ohio Dairy and Food Commission). Wines and liquors are sometimes adulterated with alum baryta, caustic lime, salts of lead, salicylic acid and pigments, particularly hæmatoxylon. Candies are adulterated with terra alba, kaolin and pigments. Most of the maple sugar sold is made of glucose.

Milk with water, sodium carbonate and bicarbonate, borax, salicylic acid, or it may contain bacteria (tubercle and typhoid bacilli).

Cheese adulterated with decomposable gelatines and may contain lead and tin from the packing, and also mineral impurities.

Sausages may contain flour, fuchsin (for colouring), organic poisons, ptomaines. (Botulismus poisoning by sausage.)

Butter may be adulterated by mineral substances; gypsum, lime colouring matters, lead chromate, kresol and binitro naphthol.

Vegetable Foods.—Flour has been found adulterated by sand, gypsum, alum, and also mixed with the fungi of the rye or wheat. Ergot poisoning by rye flour has been observed in Russia, some confectioners use dye-stuffs of various kinds, all of which are dangerous. Coffee is sometimes adulterated with copper or lead salts to give it a desired colour. Coffee is also artificially made in moulds, out of starch, molasses, caramel, chicory, etc.

Wine, beer and whiskey are subject to numerous adulterations to effect cheaper manufacture, to preserve or colour or give any desired taste. In beer, picric acid, colchicum and strychnine have been found as substitutes for hops, impure grape sugar for malt, alkalies to prevent souring, and salicylic acid to preserve it or check fermentation.

A deleterious adulteration that seems to be a growing evil is that of beer with salicylic acid. Its use in beer is to arrest fermentation and thus preserve it. It is evident that such a preservative is more necessary in a comparatively warm climate, and when the beer is shipped to a considerable distance to reach the consumer.

It is found in Baltimore, accordingly most often in beers that are brought from distant breweries, even in those that are imported; whilst our local products are rarely found adulterated with it. Dr. W. B. D. Penniman informed me that he found salicylic acid in four out of eight specimens of bottled beer. I have found it in four out of twelve samples of bottled beer. In all large cities there are firms that do a large business in supplying chemicals to breweries. As every one knows that beer should contain nothing but malt and hops, barley and water, the advertisement of these concerns is a confession of guilt. In the New York Legislature four Bills in the interests of pure beer have been introduced.

One of the Bills will be introduced with the approval of the State Board of Health, and will provide for an appropriation to enable the Board to summon the brewers before it during the investigation, and from them learn what would be the most desirable

standard. Another Bill defines pure beer as a beverage made from hops, barley malt, and pure water, and, while permitting the sale of any beverage made from other ingredients which are in themselves not injurious in their effect, will require that they shall be so marked as to indicate whether they are pure beer or whether they are beverages made from rice, corn, glucose, or other substances. A third Bill will provide that rice can also be used in addition to the ingredients mentioned in the preceding Bill, but no acids. It is claimed that the general demand for the light beer makes it necessary for the brewers to use rice. The fourth Bill will fix the standard for pure beer the same as that recognised by the German Government.

The moral aspect of food contamination is often more serious than its physical one. Take, for instance, the case of drinking-water. Undoubtedly it is to the credit of public officials to be alive to the protection of the water-sheds from which it is collected. Any pollution, or source of contamination should be promptly and effectually removed; it is not the laudable attempts to maintain the drinking-water pure that can do harm, but the sensational way in which it is usually done.

Every time the political complexion of municipal administration changes, there is a great noise about the drinking-water. From colleagues in the southern and south-eastern sections of Baltimore I have been told that not a small scare is caused among the lower and uneducated classes by this excitement about infected drinking-water, and, like the Munich citizens, explain their great consumption of beer by the fiction that the drinking-water (Isar River) causes goitre; so many a drunk is apologetically blamed to the reports of bad water, in the sections referred to. Now what do the bacterial studies of our drinking-water show? The work of many analyses and culture studies have demonstrated that we have one of the purest and healthiest drinking-waters in the country. The work of Abbott and Wm. Royal Stokes show that there are bacteria in it, but in numbers far below those found on the average in drinking-waters of other large cities. It would be more expedient to carry on the agitation for municipal filters which no doubt are very desirable in a quiet, scientific way.

THE OYSTER MUST GO.

Something more than twenty years ago, while pursuing post-graduate studies in biology, the writer observed for the first time that a drop of oyster juice resembled certain gold mines in Colorado, from the fact that there were "millions in it,"—not millions of gold, but millions of putrefactive bacteria. We at once lost our appetite for oyster broth, and have since given the bivalve a wide berth, believing that a creature whose diet consists of the offal of the ocean, and which lives upon material so filthy and noxious in character that it requires the increasing activity of a liver, constituting nearly one-half of the bulk of its body, to protect it from impending death, can under no circumstances be fit for use as a human aliment.

For many years the oyster has been under suspicion. Cases of typhoid fever in the family of the Prince of Wales a number of years ago were, at the time, attributed to the use of oysters; and the health officers of Dublin, ten years or more ago, traced an epidemic of typhoid fever to the free use of oysters. The idea was, however, for a long time scouted by the friends of the "juicy bivalve," and so the demolition by these means of infection has continued; but the bacteriologists who for several years back have been industriously prying into every nook and cranny of this mundane sphere in search of mischief-making microbes have at last brought the oyster to judgment, and, as the *British Medical Journal*, which has given much attention to the agitation on this subject, says in a recent issue (Oct. 24, 1896): "The conclusion to which bacteriologists have come is that, where these shell-fish have been

subjected to contamination, those partaking of such oysters are exposed to the gravest danger of infection." The Editor of the journal adds:—"That this risk has not been over estimated is evident from the large number of instances reported in our columns which have been traced to the ingestion of oysters, since the attention of the profession has been directed to the possibility of infection through this medium. The cases now recorded, which have been carefully investigated, where the disease has followed on the consumption of oysters open to sewage and typhoid contamination have been so numerous that no doubt can longer be entertained on the subject that we have here a source of infection which may be carried throughout the whole country, giving rise to cases of disease which may again form the centres of local epidemics. This danger being admitted, it now remains to be considered what means may be taken to protect the public. It is evident that the local authorities cannot be relied upon to act in this matter, since in most cases they have done nothing to prevent the distribution of oysters from beds plainly open to this danger.

"The proposal that a black list should be published of those oyster-beds which ought to be avoided would be useless, as it would be impossible to trace the origin of the oysters when once removed from the locality."

It thus appears that the danger from this source can scarcely be over-estimated. Oyster-beds are usually located in and about the mouths of rivers and are generally near some large city. So that exposure to contamination is the rule, and not the exception. It is impossible to find a river of any size emptying into the ocean which has not situated on its banks one or more cities, discharging through their sewers quantities of the bacillus coli communis, the typhoid bacillus, and various other disease-producing germs.

The following is an example of how extreme the views concerning the infectiveness of the oyster may become.

An epidemic of enteric fever among students at the Wesleyan University in the latter part of November, 1894, was traced by H. W. Conn (*Med. Record*, December, 1894) to oysters infected with typhoid bacilli.

Sir Wm. Broadbent reported 10 cases of typhoid, in the *Brit. Med. Journ.*, which he saw during November and December, 1894, and attributed to same origin—infected oysters.

RESULTS OF MICROSCOPICAL AND BACTERIOLOGICAL STUDY OF BALTIMORE OYSTERS.

In examining a large number of oysters, taken both from oyster-boats at Light Street Wharf and retailers of Baltimore, we made cultures from eight dozen oysters and injected small quantities of suspected cultures into the circulation and peritoneum of guinea-pigs, all of our results were negative. No organism has been isolated that in any way corresponds to the typhoid bacillus or even bacillus coli. There are a number of other organisms which botanically appear to be nearly related to the typhoid bacillus, and which, with our present methods of studying them, so closely simulated it, that the difficulty of identifying this organism is sometimes very great.

In addition to this, the variability constantly seen in pure cultures of the bacillus itself in no way renders the task more simple.

For example, the morphology of the typhoid bacillus is conspicuously inconstant; its growth on potatoes, which were formerly described as characteristic, may with the same organism at one time appear as the typical invisible development; at another time it may grow in a way easily to be seen with the naked eye, and the change of reaction which it is said to produce in bouillon is sometimes much more intense than at others. The only properties possessed by it, that may be said to be constant, are its motility, its inability to cause fermentation or glucose, lactose or saccharose or to

cause coagulation of milk, the absence of indol production and its growth on gelatine plates. But there are other organisms that approach these characteristics to a degree requiring application of all these tests for differentiation.

Dr. Robert L. Randolph, of Baltimore, in an interesting study of oyster shucker's keratitis—made bacteriological studies of the Chesapeake oyster. He found no pathogenic bacteria in them.—(*Johns Hopkins Hospital Med. Bul.*)

In the tissues of the oysters no typhoid infection was manifest in serial sections of stained preparations. The fact that we have very little typical enteric fever for a city of half a million inhabitants, although we are the largest oyster-eating community perhaps in the world, and that during the seasons in which most of the oysters are eaten, there is no increase in the number of cases of typhoid over the other season, is as weighty an argument for the healthiness and purity of our lamelli branches as any. Besides, let us assume that the oyster does contain many bacteria (though not pathogenic bacteria as have been found elsewhere), it should not be discarded as a food article because the "bivalve" can be made sterile in all the forms in which it can be prepared by cooking.

However, the proximity of oyster beds of our Chesapeake to the drain of the tributaries on which the smaller cities of the State are situated should be legally prevented. It is not said that sewage reaching these beds could not contaminate them, but that at present, owing to the unique and immense extent of our tide water area with very few cities over 10,000 of inhabitants along its geographical outline, the beds are comparatively uninfected.

DEADLY WELL WATER.

WATER from an abandoned well has given rise to several cases of typhoid fever near Rye Beach, N. Y. A party consisting of half-a-dozen persons went into camp near that place and drank water from an old abandoned well. The whole party immediately became ill, and two of the members have since died.

THE LONDON COUNTY COUNCIL AND LONDON'S WATER SUPPLY.

At the last meeting of the London County Council, Mr. Cornwall moved: "That it be referred to the Public Health and Water Committees to inquire and report whether the causes which have led to the typhoid fever epidemic in Maidstone have any parallel in the conditions of the London water supply, and what steps, if any, should be taken to prevent the propagation of the disease in London." He said that the awful example of Maidstone ought to ensure an immediate inquiry by this Council into the state of London's drinking water. He did not dispute that the water was day-by-day fit to drink, but it was quite apparent that London was in constant danger from pollutions of the rivers.

Mr. Idris, in seconding the motion, said, as a member of the Thames Conservancy Board, he knew that both the Thames and the Lea were being constantly polluted. As an instance he quoted the case of Hertford, where it was maintained that they had a right to pollute the river. A foul ditch there had for a long time been running into the water of the East London Company, and the only way the company could stop it was by buying up the right of the local authorities to use this ditch. Another source of pollution was at Maidenhead, the Thames Conservancy inspector having reported that the condition of the water there from sewage pollution was very unsatisfactory. He described the

pollution as of long standing. It was difficult to get the Conservators to take proper action because the River Purification Committee of that body consisted very largely of people interested in the land in the Thames Valley, and who thought it unjust that they should be compelled to purify at their own cost the effluents in order to provide drinking water for London. With regard to the pollution of the rivers by barges, it was a fact that the refuse of London was constantly being taken up and down in the most leaky and rotten barges to be obtained. The water which found its way into them was constantly being pumped out into the river. That was a great source of danger which merited earnest consideration.

Eventually the motion was adopted.

THE SANITATION OF FOREIGN HEALTH RESORTS.

OUR very excellent contemporary, *The Surveyor*, says:—

"People who will insist on excessively stringent tests before taking a house in London will gaily enter a house on the Riviera without any question. If the exact state of affairs were always known the joy might be short-lived. A year ago, when the correspondent let his house in London before going out to the Riviera, the tenant had an extensive examination made by an expert, and a very stringent test was applied to show that there was no possibility of the escape of sewage or sewage gas into the house or the adjoining soil. That represents the practice in England. On reaching his destination on the Riviera he came across a house of an extensive character being built in a very good situation. In the middle of it in the basement was a great pit. Inquiring the object of this, he was told that it was the 'fosse' or cesspool for the house. The pipes leading into it from the closets were very large and of rough earthenware, with very imperfect joints, and they were all inside the house. The further information was forthcoming that this was quite a common method of construction. 'The winter resident,' also tells us that one of his friends who had an examination made of a house he proposed to take, was told that it was in such good sanitary condition that *not a drop of sewage could escape outside the house*. In the case of another house it was found upon examination that the cesspool was partly outside and partly under the house, the soil pipes being of the roughest construction and innocent of any pretence to a syphon trap. An inch or so of water in the pan was supposed to provide all necessary security against the admission of sewer gas. The owner was indignant when it was hinted that the sanitary arrangements left something to be desired; the English, he said, were mad about microbes; he had always let the house, and he would do nothing. Finally it is stated by the correspondent, on the authority of an English doctor, that ninety-nine houses out of a hundred are in an equally unsatisfactory condition. The Riviera obviously is not a sanitary Paradise, whatever its advantages may be in other respects. Some model bye-laws, coupled with the capacity to enforce them, would be a not unprofitable investment on the part of the municipalities, considering what is at stake."

REMINISCENCES OF LIEBIG.

THE *Pharmaceutische Wochenschrift* (Chem. and Dr.) contains some interesting personal reminiscences of Justus von Liebig, by Karl Vogt, who studied under the great chemist. When Liebig was engaged in research or in writing he was absolutely restless, and his eagerness to get out his results were quite painful. It used to be said that he finished his papers before the crucible with the last stage of the experiment had left

the furnace. When engaged in such work he never considered his own convenience or that of his assistants. One day he entered the laboratory with a stoppered bottle, and called upon Vogt to bare his arm. The assistant did so. Liebig at once rubbed the stopper on the skin. Vogt felt an acute burning pain, and ran to dip his arm in water. "Burns, doesn't it?" queried Liebig, kindly. "Quite so. This is dehydrated formic acid, which I have just succeeded in preparing. A drop touched my cheek. See? It drew a blister at once." Then, to another assistant: "You, Demarcay, just bare your arm also! and all you gentlemen pray do the same." Some did; one, Ettling, firmly refused. "Well, Ettling," said Liebig, "I don't blame you. All you gentlemen will have thickly swollen arms tomorrow. My dehydrated formic acid is a strong caustic. All dehydrated acids are, because they absorb water from the tissues." Vogt, who had got the biggest dose, had to keep his arm in a sling for some days, and he bears a scar to this day as a souvenir of the discovery of dehydrated formic acid.

Liebig always gave his assistants full credit for all the work they did, and encouraged them with signing everything with their own names. "It stimulates them to fresh effort," he would say. "Nothing is more absurd than the French system of publishing all laboratory work in the name of the professor at the head of the school. It discourages the assistants, and often involves a man like Dumas into polemics in defence of blunders really made by his assistants, but published over his own signature."

His manner with people who wanted him to train their sons as specialists was brusque. A cotton-prince from Mulhouse, Vogt relates, called upon Liebig with the request that his son might be taught the chemistry of dyeing in Liebig's laboratory. One son was a practical spinner, the other an engineer. This one was to be the dyer of the concern. "I am not a dyer," said Liebig; "your son is no use to me—take him to the dyeing-mill." The manufacturer persisted, and at last besought Liebig, almost with tears in his eyes, to take the youth. "Very well, then," said the chemist, "I'll take your boy for two years. If there is anything in him I'll make a chemist of him. But, look you here, while he is with me he won't hear a single word about dyeing. There will never be a lecture on colouring materials. All he will be taught is chemistry. But when he comes back to you he will know more about dyeing in a fortnight than all your foremen taken together. D'you understand?" The father never regretted that he agreed.

A FOOD ADULTERATING TRUST.

IN the evolution of the trust idea, says the *New York World*, it is only logical to expect that the newest trust

will be the nearest in its approach to the perfect ideal towards which trust methods are directed; that in its defiance alike of the law of the land and of the laws of nature it will be more greedy, impudent, cynical, and sordid than any earlier efforts to the same direction.

All these natural expectations are justified by the appearance upon the monopoly stage of the Glucose Trust. This latest novelty in restriction of competition and restraint of trade has issued a circular broadcast to all the flour-milling interests of the country, accompanied by a sample of the Glucose Trust corn-starch and a statement that "about 10 per cent. of this corn-starch can be substituted with flour to its benefit."

Corn-starch is not flour and adulterated food is not pure food, and the substitution of 10 per cent. of corn-starch for an equivalent of flour is a swindle and a rank robbery, in addition to being a menace to health. It is, moreover, a swindle which will naturally find its victims chiefly among people of limited means, who buy flour in small quantities, and to every person reached by the circular—millers, brokers, merchants, and bakers—it is a blackmailing threat of loss of business as the penalty of refusal to join in the swindle.

This, however, is not a wholly new feature of trust management. It is merely an advance in the line of trust evolution, and shows the progress made by the Glucose Trust in profiting by trust teachings.

HOUGHTON-LE-SPRING TYPHOID AND THE WATER SUPPLY.

At a meeting of the Houghton-le-Spring Urban District Council, Dr. Park (Medical Officer of Health) drew attention to the danger of an epidemic of typhoid fever and the polluted condition of the water supply. He said one of the present cases was probably due to bathing in Hetton Burn and swallowing polluted water. He suggested that the water supply should be subjected to bacteriological examination with a view to the provision of a purer supply.—The Board decided to call in the services of Professor Murray to examine the water.

DILUTED STOUT.

FRANK JOHN SULLIVAN, the landlord of the Monster tavern, St. George's-row, Pimlico, appeared at Westminster Police Court on October 9, to answer a summons taken out by the Inland Revenue for selling stout which was adulterated with the equivalent of nearly two gallons of water to the 36-gallon barrel. Mr. Hawkins prosecuted for the Excise; Mr. Bodkin, barrister, appeared for the defence. This prosecution and a previous one at this Court mark a new departure on the part of the Excise authorities, the attention of

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Manufactured in England on the popular Dutch principle.

ANALYTICAL REPORTS.

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"I have submitted a sample of 'Kurruwa' Cocoa to a chemical analysis and dietetical examination. I find it to be a most nutritious preparation, manufactured on the Dutch system, whereby the insoluble albuminoids are converted into soluble albuminates. The Cocoa contains no free Alkali, and the excess of fat in the Cocoa bean has been carefully removed in the process of manufacture. The beverage is easily prepared from the powder, and the aroma and flavour are distinctly above the average."

"As the result of my examination, I am able to say that 'Kurruwa' Cocoa is one of the best brands of its variety in the market, and shows evidence of skillful and careful manufacture. (Signed) JOHN GOODFELLOW, Ph.D., F.R.C.S.,

Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London; Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

PACKETS, 6d., TINS, 1-lb., 8d., 1-lb., 1/4, 1-lb., 2/8. This Cocoa is only sold in Packets and Tins. Please see that the Trade Mark "Kurruwa" is on each label. No other is genuine.

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"We cannot speak too highly of the flavour and quality of the chocolate, which is absolutely pure and unadulterated with starch or any other material. It is perfectly levigated and homogeneous in composition, and we can favourably commend these "Chocolate Almonds" to all lovers of this delicacy.—*The Family Doctor*."

"KURRUWA" CHOCOLATE CROQUETTES.

These consist only of the finest Cocoa and Sugar flavoured with Vanilla, this flavouring being obtained by using the best Vanilla Pods, and not the chemical substitute so often employed.

their officers being now directed to the analysis of samples of stout rather more than that of porters and mild ales as heretofore. Assisted by an expert witness from Messrs. Watney and Co., the brewers who supplied the defendant, the prosecution showed that the quality of stout, known as "Imperial double brown," retailed by him was of considerable less specific gravity than when it left the brewery. In cross-examination, Messrs. Watney's brewer admitted that the gyles of this quality stout might differ in gravity to the extent of even two degrees, and Mr. Bodkin called defendant's cellarman, who deposed that he had mixed two different brewings in the cellar owing to one being in a leaky barrel. Mr. Sheil said he could not accept this explanation. If the adulteration was not clearly accounted for by the laws of nature or by the laws of beer—(laughter)—he should always fine the landlord. It might appear a very trifling dilution, but he had been given to understand that this made all the difference in the profits of a large house. There would be a fine of £10, with £2 6s. costs.

PRESERVED MILK.

THE City Analyst of Rotterdam finds that preserved milk dissolves lead out of its alloys, such as the solder of the cans which hold it, or the stoppers of bottles in which it is sterilised. As lead is a poison, people should be careful not to use tins for keeping milk. In sterilising and preserving the milk, one should only use boilers or cans free of lead. According to "Hygiene Moderne," nobody suspects the number of colics this "maudit métal" has already caused, or will yet cause, not to speak of graver maladies.

IMPRISONMENT FOR BAD MEAT.

At Burslem, on Oct. 12, Albert Bew, butcher, Burslem, was charged with being, on Sept. 25, unlawfully in possession of four pieces of pork intended for the food of man, the same being pronounced to be unwholesome.—Mr. A. Ellis (Town Clerk) appeared for the prosecution, and Mr. Ashmall defended.—Mr. E. Bourne (Market Inspector) deposed to seizing, at 9.20 on the night of Saturday, Sept. 28, four pieces of pork, weighing 10½ lb., which were in a basket behind the defendant's stall in Burslem Shambles. He called the attention of the defendant to the condition of the meat, and he said he was sorry, but he did not know that it was bad. The meat was afterwards condemned and was destroyed on the order of Mr. T. Hulme (a magistrate).—Police-constable Brown stated that, at 8.30 on the night in question, Mr. Sargeant, one of the meat inspectors, took him to Bew's stall and pointed out four pieces of pork which were among other portions of meat on the stall, and told him to watch that they were not sold. The meat was afterwards put in a basket and placed behind the stall.—Mr. J. M. Taylor (Medical Officer) stated that he examined the meat at 9.50. It was soft, sticky, pale-looking, and full of small cavities or cysts, in which were the ova of the tape-worm. If the pork were eaten the ova would develop tape-worm in the human body.—By Mr. Ashmall: The cysts were visible to the naked eye.—Mr. A. Hodgkins, veterinary surgeon, Hanley, deposed that the pork was affected with measles, and if eaten would produce tape-worm. The disease was well-known among butchers, but he was bound to say, in fairness to the defendant, that the complaint did not occur very frequently, and if the defendant had not had much experience he might not have noticed it.—Mr. Ashmall raised the legal objection to the summons that when the meat was seized by the informant, Mr. Bourne, it was not exposed for sale,

and was not intended for the food of man, having been put in a basket and placed behind the stall with the view of being removed and destroyed.—The Stipendiary overruled the objection.—Mr. Ashmall then, dealing with the case on its merits, said the defendant had bought the pork from a farmer, the whole purchase only being 10 lb. He did not know that anything was the matter with it, and when Mr. Sargeant told him it was bad he said he would not sell it. The defendant had been apprenticed to the grocery business, and had only had 2½ years' experience as a butcher. Up to a fortnight previously he had been in partnership with his brother, who had bought in the meat, the defendant attending to the sale. On these grounds he asked the Stipendiary to deal with the case leniently.—Mr. Wright said he was bound to punish severely in these cases, as the practice was calculated to cause widespread distress and misery among the poorer population who bought this unsound meat. Consequently, he could not give effect to any appeal for leniency, but he also thought the defendant ought to have known, after two years' experience, the difference between good and bad meat. The defendant would have to go to gaol for six weeks, and must pay the costs of the prosecution (£2 7s. 6d.); 14 days' imprisonment in default.—Mr. Ashmall gave notice of appeal, and the defendant was released on bail pending the sureties for prosecuting an appeal being entered into.

DISEASED MEAT.

JOHN JAMES COATES, butcher, of Scotland-road, Colne, was summoned on Oct. 9 for depositing for sale meat unfit for food.—J. W. Priestley, sanitary inspector, said he visited a slaughter-house in Peel's-yard and saw hung up and dressed for sale the carcasses of several sheep and lambs. Amongst them he noticed the carcasses of a sheep and lamb which appeared to be discoloured and in very poor condition. Witness examined them very carefully and found they were dressed in the ordinary way for sale. The hind legs of the lamb was covered with a net of fat. The carcass of the sheep was very thin and emaciated, the flesh was flabby and devoid of fat and dark coloured. The ribs and shoulder blade were almost penetrating the skin. The brisket was very discoloured. The carcass of the lamb was very small and badly nourished and slimy to the touch. His opinion was that the animals had suffered from some wasting disease. They were totally unfit for human food. Witness had them seized and conveyed to the Corporation yard. The same evening witness had an interview with the defendant, and told him he had seized the carcasses. Defendant, after looking at them, said they were his. In answer to witness defendant said he could destroy them if they were not right. Witness asked defendant what explanation could he offer, and he replied, "What can I say, they are both sound, aren't they?" Defendant further told witness that he had bought them at Skipton on the previous Monday and killed them the Wednesday following. The carcasses were seen by the Medical Officer (Dr. Millar), Dr. Jackson, and the Sanitary Inspector for Colne, before they were destroyed.—H. Charles Sugden, A.S.I., Sanitary Inspector, Colne, said he was with the last witness on September 30 last and examined the sheep and lamb. In his opinion the flesh of both carcasses were totally unfit for the food of man.—Dr. Millar (Medical Officer) deposed to seeing the carcasses of a sheep and a lamb in the Corporation yard on Oct. 1. There was no doubt that neither was fit for human consumption.—Dr. Jackson said he examined the carcasses and found that they were practically skeletons.—Defendant said the carcasses were not in as good condition on Friday as they were on Thursday.—The Chairman (Mr. Tunstill) said: We consider it a

very bad case, and we shall fine you in the sum of £10 and costs, or two months.

At Clerkenwell, on October 14, Alfred Leete, butcher, of Islip, Thropston, Northamptonshire, was summoned before Mr. Fenwick for depositing, on September 9, at 109, Charterhouse-street, Smithfield, eight quarters of beef that were unsound, and unfit for the food of man.—Mr. Hale prosecuted on behalf of the Holborn District Board of Works.—The meat was seized by George Billing, sanitary inspector, and conveyed to Clerkenwell Police-court, where Mr. Horace Smith, the presiding magistrate, condemned it. Four of the quarters were parts of a cow that had died or been slaughtered while in a dying state, and the remaining quarters were portions of an old ox that had suffered from tuberculosis. The meat was consigned to a Mr. Stern, and the defendant, in a note found inside one of the hampers, asked the salesman to "do the best he could with it."—A previous conviction was proved against the defendant, and Mr. Fenwick sent him to gaol for three months.

At Crewe, on October 19, John Briscoe Reade, a butcher, was charged with exposing for sale in Crewe Market 23 pieces of beef which were unsound and unwholesome.—The Town Clerk (Mr. F. Cooke) prosecuted, and said it was not suggested that the meat was diseased, although in dressing it portions had been removed, which was a very suspicious circumstance.—Dr. Young, the Medical Officer of Health for Crewe, said that on September 20 he visited the market, and found 23 pieces of beef, in weight about 1cwt., upon the defendant's stall. The meat was pale, wet and flabby, and dropsical. It was unsound and unwholesome, and unfit for food. On many of the pieces there were extravasations of blood. On one piece of the rump there was a large blood clot about the size of a person's hand. This piece of meat would be particularly dangerous if consumed by persons. He drew the defendant's attention to the meat, and he denied that it was unsound. He said he had given £10 for the beast.—Dr. Vacher, medical officer for Cheshire, Dr. Cork, medical officer for the Wenn District Council, Mr. R. O. Stafford and Mr. J. Wilson, veterinary surgeons, corroborated, and said they condemned the meat as unsound and unfit for human food. All the witnesses drew attention to the absence of the pleura, which had been stripped off the ribs, and which, they said raised the suspicion that the animal had suffered from tuberculosis.—The defence was that the large blood clot had been caused by a splinter of bone which was working through the flesh, and that the animal was otherwise healthy and sound.—Messrs. Manuel, veterinary surgeons, Dr. Stainsby, and other witnesses declared that the meat was sound.—Mr. W. Coomer, farmer, said he sold the cow to the defendant for £4. The cow was healthy, but blind. It was twelve years old, and had had ten calves.—Several persons were called who said they ate portions of the meat without ill effects.—The Court fined the defendant £3 and £8 costs, or two months' hard labour.

CAMPHORATED OIL v. LINIMENT OF CAMPHOR.

SHEFFIELD CHEMIST FINED.

At the Sheffield Police-court, on October 12, before Mr. H. J. Wilson, M.P., and Mr. F. Mappin, Walter Alcock, chemist, 318, Shales Moor, was summoned for an offence against the Food and Drugs Act, by selling liniment of camphor which was not of the quality and substance demanded.

Mr. Sayer, Town Clerk *pro tem.*, who prosecuted, stated that one of the Corporation Inspectors asked the defendant to supply him with eight ounces of liniment of camphor. The liniment was submitted to the public analyst, who reported that it consisted of 26

parts of camphor, 12 parts of olive oil, and 60 parts of mineral oil. This was not liniment of camphor according to the standard of the British Pharmacopœia. He admitted that the British Pharmacopœia was not the standard directed by the words of the Food and Drugs Act, but it had been held in several cases that that authority was to be accepted. One of the cases came from Sheffield, where a chemist sold tincture of opium which was deficient in strength as compared with the standard in the British Pharmacopœia. Lord Chief Justice Coleridge and Justice Smith held that the chemist had been rightly convicted under the section, although the purchaser had not asked for the drug to be prepared according to the standard of the British Pharmacopœia, because tincture of opium must mean the article known in commerce as tincture of opium, and the article supplied was not the tincture of commerce, but an inferior article. The present case was exactly parallel. Liniment of camphor was extensively used as a rubbing material, more especially for young children for bronchitis, and the addition of mineral oil reduced the emollient properties of the liniment, and caused more of it to be used. Mineral oil was cheaper than olive oil. The analyst's certificate stated that according to the British Pharmacopœia, liniment of camphor should be prepared by mixing one ounce of camphor with four fluid ounces of olive oil, in the case of the sample, olive oil was largely replaced by mineral oil. This substance was objectionable, as besides being cheaper, mineral oil does not possess the same therapeutic properties as olive oil. Mr. Sayer went on to say that no mineral oil should be used at all, and in this case it contained 68 per cent.

An Inspector having given evidence as to the purchase of the article,

The defendant admitted that the Inspector asked for liniment, and he supplied him with camphorated oil, and labelled the bottle camphorated oil. The latter was almost universally used for rubbing purposes, and he could not remember in all his experience having been asked for liniment. What he supplied he held to be better.

Mr. Sayer pointed out that the Inspector asked for liniment, and not for camphorated oil.

The Chairman: Was the bottle labelled camphorated oil?

The Inspector: It was.

Mr. Sayer: That is the popular name.

The Chairman said he could not see that the defendant's explanation relieved him of liability; 68 per cent of mineral oil was a large amount.

A fine of £1, including costs, was imposed.

SPIRITS OF SWEET NITRE.

At Spittlegate, Richard Steel, druggist, of Colsterworth, was summoned under the Sale of Drugs Act, 1894, for selling, to the prejudice of the purchaser, on September 21, a quantity of spirits of sweet nitre which was not of the nature and substance required by Act of Parliament.—Mr. F. W. Robinson appeared for the defence.—Police-constable Beach deposed to visiting the defendant's shop on the day in question, and asking for three-pennyworth of sweet spirits of nitre, for which he paid 3d. He then informed Mr. Steel that he purchased the nitre for the purpose of having it analysed. He divided it into three portions, leaving one portion with the defendant.—Supt. Cobourn deposed that he had sent a sample of the nitre to the Public Analyst, who had certified that it was deficient in strength to the extent of 80 per cent. of the active principle.—Mr. Robinson said his defence was that the purchaser was supplied with what he asked for. The analyst's report was based on nitrous ether. He contended that sweet spirits of nitre and nitrous ether were two distinct preparations.—Defendant was sworn, and

stated that he purchased the sweet spirits of nitre from Mr. Robinson, of Stamford, and had sold it just the same as he had received it.—Mr. Silas Robinson, of Stamford, stated that he had sold spirits of nitre to the defendant, which he had sold in exactly the same way as he had received it from a London firm.—Mr. S. Ward, a member of the firm of Messrs. Hodgkinson, Parke, and Ward, chemists, of London, stated that they had supplied sweet spirits of nitre to the last witness. There were two distinct preparations, namely, sweet spirits of nitre and spirits of nitrous ether. The former preparation was prepared from the London Pharmacopœia.—Mr. Edward Bell, chemist, of Spalding, gave similar evidence.—The Bench expressed the opinion that there was no intention to defraud, and dismissed the case, without costs.

SPIRITS.

At Chelmsford County Sessions, on October 15, William Spooner, landlord of the Blue Lion Inn, Great Baddow, was summoned for selling whiskey diluted to 34 degrees under proof, on September 7. Mr. W. J. Gray appeared to defend on behalf of the Chelmsford and District Licensed Victuallers' Association. Mr. Raglan Somerset (Deputy Chief Constable) deposed to purchasing a pint of whiskey at the defendant's house. Half of it was sent to the public analyst, who certified that the whiskey was 34 degrees under proof, and nine degrees below the minimum strength allowed for this spirit. Cross-examined, witness stated that he saw the cardboard notice in the house: "All spirits sold here are diluted."—Mr. Gray contended that there had been no sale to the prejudice of the purchaser, as the fact that the spirits were diluted came to his knowledge at the time he bought the whiskey.—The Bench ruled against Mr. Gray on this point.—Mr. Gray: I take it you will grant me a case on this point, because it is a very important one.—The Chairman: Yes.—The defendant was fined £1 and 7s. 6d. costs.—Jasper Levy, landlord of the White Horse Inn, Great Baddow, was summoned for a similar offence on the same date.—Mr. Somerset deposed to purchasing half-a-pint of Scotch whiskey from the defendant, but he did not see the notice calling attention to the fact that all spirits sold at the house were diluted. As a matter of fact, the notice was not in a very conspicuous place. The whiskey was found to be four degrees below the minimum strength.—The defendant was fined 5s. and 7s. 6d. costs.—George Finch, landlord of the Cricketers' Inn, Danbury, also summoned for selling whiskey under proof, on September 7, was fined £1 and 6s. costs. The whiskey in this case was 10 degrees below the minimum strength.—Albert Jackson, of the King's Head Inn, Great Baddow, was summoned for a like offence on the same date. In this case the whiskey was found to be three degrees below minimum strength. No notice with regard to spirits sold at the house being diluted was seen by Mr. Somerset when he bought the spirits. Defendant was fined 5s. and 9s. costs.

At Grantham Petty Sessions, Sarah Ann Wood, landlady of the Chequers Inn, Woolsthorpe-by-Belvoir, was summoned for selling adulterated whiskey on the 20th ult.—Mr. Robinson, who defended, admitted that an offence had been committed, but the adulteration was only three degrees under the minimum allowed by law. The spirit had been in the keg a week, and had probably lost strength by evaporation.—Fined 20s. including costs.

At Spittlegate, Sarah Ann Woods, landlady of the Chequers Inn, Woolsthorpe-by-Belvoir, was summoned for selling a quantity of whiskey, which was found to be adulterated, at Woolsthorpe on Sept. 20th.—Police-constable Sutton deposed to purchasing the whiskey from Mrs. Woods, which, on being analysed, was found

to be 28 degrees under proof, and Mr. Robinson, who defended, contended it was a very trivial offence, because the whiskey was only three degrees below the allowance. Possibly the whiskey might have evaporated to that extent by being sent to the analyst.—A fine of £1, including costs, was imposed.

At Brackley, William Coleman, Farthinghoe, ale-house keeper, was charged by Thomas Mattinson, of Towcester, Inspector of Weights and Measures, with selling adulterated brandy 45 under proof, on Aug. 19.—Evidence was given by Mr. Mattinson, who produced the analysis of the County Analyst. Witness had not seen any notice up, and his attention was not called to same.—Defendant's son appeared for his father, and pleaded ignorance of the fact that it was necessary to call attention to the notice.—Fined £1 and 6s. costs.

At Stratford-on-Avon, Alfred Tookey, innkeeper, of the Prince of Wales Inn, Rother-street, was summoned for selling gin adulterated with 10 per cent. excess of water.—Mr. F. G. Bennet, County Council inspector, gave evidence.—Mrs. Tookey said she was responsible for the house. She had only guessed at the quantities in measuring the gin, and had no proper instrument for the purpose of testing the strength.—The Bench fined her £1, including costs.

At Carmarthen, on October 9, for adulterating whiskey, John Jones, keeper of the Square and Compass Inn, Pensarw, was fined £1 9s. 2d., including costs, by the magistrates of the Carmarthen Petty Sessional Division.

PARAFFIN WAX IN SWEETS.

At Rhyl, on October 12, Mrs. Sophia Gregory, confectioner, Wellington-road, Rhyl, was charged by Police-inspector Williams with selling sweets containing 5·1 per cent. of paraffin wax. Mr. Gamlin appeared for defendant. Inspector Williams gave evidence to purchasing a dozen cigar sweets for 3d. from defendant, and on sending them to be analysed, he found that they contained 5·1 per cent. of wax, the melting point of which was 121 degrees Fah. The analyst certified that it was injurious to health. The witness produced 29 grains of paraffin wax which had been taken from two of the sweets. For the defence it was contended that the defendant had no knowledge that there was paraffin wax in the sweets and that she had used reasonable diligence in ascertaining their purity. The bench fined defendant 10s. and £1 18s. 6d. costs.

MILK.

At the Stratford Petty Sessions, on October 9, Mr. A. Fox, of Little Vange Hall, Pitsea, was summoned for consigning milk to the Callow Park Milk Company, Barking, on September 7 and 8, which was diluted to the extent of 15 and 18 per cent. respectively; and Mr. E. Fox, of Wootton's Farm, Laindon, was summoned for having consigned milk to the same company on September 2, which was diluted to the extent of 10 per cent.—Capt. Kittoe, Inspector under the Food and Drugs Act, said he took samples of the milk upon its arrival at Barking station; and he produced the certificates of the analysts.—Mr. C. Steele, who appeared for the Dairy Company, said the defendants contracted to supply milk that was whole, entire and unadulterated. The company had previously taken samples of the defendants' milk, and it was in consequence of what they then ascertained that the company requested the inspector to take other samples.—Mr. F. A. Stern, for the defence, said he was not in a position to dispute the facts. His clients had found out that a man in their employ had been guilty of grievous

acts of dishonesty; and the man had been dismissed. He had watered the milk unknown to the defendants; but, of course, they were responsible for the acts of their servants.—Mr. A. Fox was fined £4 and 16s. costs; and Mr. E. Fox, £2 and 8s. costs.

BEER.

At Clerkenwell, on October 15, James Frederick Stammers, of 7, Lizard-street, St. Luke's, was summoned for diluting beer on July 19. According to the evidence of the analyst, the beer was 10 per cent. below standard. Mr. Ricketts, for the defence, contended that the dilution was the act of a servant, who had since been discharged. The defendant had been in the trade for seventeen years, and had an irreproachable character. Mr. Horace Smith imposed a fine of £5 and £2 16s. costs.

COFFEE.

At Southwark, on October 14, Harry Spiers, of George-row, Bermondsey, was summoned for selling coffee containing 65 per cent. of chicory, butter containing 25 per cent. of margarine, and beat sugar instead of Demerara.—A boy having given evidence as to the purchase of the articles, Chief Inspector Thomas said he sent the boy to the shop, in consequence of complaints made to him by some of the customers, who were mostly of the very poorest class, buying their supplies by the ounce.—The defendant said he took over the coffee from his aunt, who formerly kept the shop; the butter he bought as pure butter; and, as to the sugar, he could not tell everybody it was not Demerara. The shop had ruined him, owing to his wife's illness, and he had now moved to Tilson-road.—Penalties amounting to £7 17s. 6d., were imposed; and, in default, three months' imprisonment.

DRUGS.

At Guildford, on October 16, James H. Littleboy, a chemist, of Woking, was summoned by the Surrey County Council for selling "Gregory powder" which was not of the nature and substance asked for by the purchaser. A label on defendant's package stated that it was prepared according to the original recipe of Dr. Gregory. According to the British Pharmacopœia, Gregory powder should be composed of rhubarb powder 22·2 per cent., magnesium oxide 66·7 per cent., and ginger in powder 11·1 per cent. In the preparation sold by the defendant carbonate of magnesia was substituted for the oxide, the former being half the price of the latter.—For the defence it was stated that the carbonate had the same effect therapeutically as the oxide, and that therefore the substitution of it was not to the prejudice of the consumer.—Medical evidence was called to prove this.—The Bench held that the article sold was not to the detriment of the purchaser, and dismissed the case.

LEEDS AND ADULTERATION.

DURING the quarter ending September 30, 1897, the samples received and analysed by Mr. F. Fairley, City Analyst, have been: Milk, 67; skim milk 2; butter, 4; margarine, 1; cheese, 2; glycerine, 3; castor oil, 1; total, 80. Four of the samples of milk were adulterated; two contained 27 and 18 per cent. of water respectively; and two had been deprived of a portion of their fat. In one case this abstraction amounted to 20 per cent., and in the other to 11 per cent., as compared with the lowest quality of genuine milk.

Thirty-five milks were reported to be of low quality. In his opinion many of these, if followed to their sources, would be found to be adulterated with at least 10-12 per cent. of water. By comparison of milks as sold with the milk from the same cows taken in the

presence of the inspector, even 1 per cent. of water can be proved with certainty.

This method eliminates the effect of the natural variations in milk. A great improvement on the present system would be the legal adoption of a standard corresponding to average genuine milk, as is done in certain other countries. It will then fall to the vendor of poor milk to show how he comes to supply milk below the standard, and the evil would be abated.

Three of the butters were adulterated with foreign fat, containing 82, 80, and 73 per cent. respectively of fat other than butter-fat.

The other samples were genuine.

MUSTARD.

At Blandford, on Oct. 12, Henry Wareham, grocer, of Blandford, was summoned for selling 6 oz. of mustard at his premises in Orchard-street, which was adulterated to the extent of 25 per cent. with wheat flour.—Inspector Brown stated on Sept. 18 he called at the defendant's shop and asked a young person who was serving in the shop for six ounces of mustard, which was supplied to him in two tins. After completing the purchase he offered to leave a portion of it with her, telling her it was for public analysis. She declined his offer, and he then sealed the mustard in her presence. The mustard was handed to Dr. Comyns Leach, who certified to its being adulterated to the extent of at least 25 per cent. with wheat flour.—In answer to defendant, Inspector Brown said he paid threepence for the mustard, that being the price asked for it.—Defendant said that he was unaware that it was adulterated, and the persons from whom he bought it should have informed him if it was adulterated.—Fined 6d., the costs 2s. 6d., and analyst's fee, 7s. 6d.

A SENSIBLE FINE FOR THE MARGARINE SWINDLE.

At Clerkenwell, David Morgan, of 18, Park-street, Southwark, was summoned before Mr. Paul Taylor by the Islington Vestry for selling margarine as butter, and for exposing margarine for sale without having it labelled in accordance with the Margarine Act.

Mr. Bramall, who prosecuted on behalf of the Islington Vestry, said the defendant was a member of the "Welsh Gang," who systematically defrauded the public by selling margarine as butter. The defendant owned a large number of shops, and whenever he was summoned he introduced the magistrates to a person to whom he alleged he had transferred his business prior to the date upon which the sample was taken. On some occasions Morgan had allowed himself to be impersonated by his own servants, who had appeared in answer to summonses under the Margarine Act, and had paid the fines. Many previous convictions were proved against the defendant, and Mr. Bramall asked the imposition of the full penalty of £100.

Mr. Paul Taylor said it appeared to be a case in which the public had been defrauded for years, and he imposed penalties amounting to £70, and £21 costs, £91 in all.

TINNED SALMON.

At the Whitechapel County Court, on October 13, the case of Huron v. Clapper came on for hearing. It was an action to recover 18s. 3d., the balance of a bill for goods supplied. The defendant said he had not paid for the goods, as part was sugar of a sort that he could not sell, and the rest was a case of salmon which was supplied in a stinking condition.

Plaintiff: The salmon was not bad.

Defendant: Well, Lambeth-walk or Barking Creek isn't in it with this lot!

His Honour: Have you sold any tins?

Defendant: I sold one, but the party brought it back wrapped up in scented paper to take the wiff off.

As the defendant had opened the case his Honour gave judgment for the plaintiff.

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Food & Sanitation

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Food and Sanitation.

SATURDAY, OCTOBER 30TH, 1897.

QUACK DRUGGING OF FOODS.

UNDER this heading our contemporary, *The Medical World*, utters the following timely protest against this reprehensible practice:—

"It is over three years since the Select Committee on Adulteration heard amongst other evidence some upon the surreptitious drugging of foods. The milk-vendor, wine merchant, butter-man, bacon-dealer, the butcher, and other traders have long drugged the public

with boracic, salicylic, benzoic, formalin, etc., without any real interference, save at Birmingham and Glamorgan. What is known of the action of these drugs upon the consumer of the drugged food is by no means satisfactory. Apart from the fact that the use of such drugs enables vendors to sell as food articles which have often reached a stage unfitting them for human consumption, there is nothing to demonstrate that these powerful drugs do not act injuriously upon organisms performing necessary functions in the human body, whilst much has been already noted showing their noxious effect in certain cases. Recently an object lesson, showing how the drugging of food and drinks is spreading, was given at the South Western London Police Court. Thomas Wood, a chemist, of 14, The Parade, Tooting, was summoned, at the instance of the Inland Revenue authorities, for selling coca wine without a licence.—Mr. Alpe prosecuted.—Mr. Lynch, an Excise Officer, stated that on May 24 he purchased a pint bottle of coca wine at the defendant's shop. On analysis the wine was found to contain 29·2 proof spirit.—Mr. Lane (warmly): In point of fact, it is bought from chemists by women who have given way to drink. I have known it to be extensively used for that purpose.—The defendant produced a letter from the wholesale merchants in which they admitted that the error was theirs.—Mr. Lane (after looking at the letter and the label on the bottle): Why do you sell the wine that has a plain label?—Defendant: There is a greater demand for it.—Mr. Lane: Precisely. That is in order to convey to people that it is not a nasty medicated thing, but a good, drinkable wine.—A fine of £5 and costs was imposed.

"The extension of quack drugging is seen again in an article now very largely advertised.

"We do not know if there is any such person as 'Dr.' Tibbles, or if he is as much a myth as 'Sequah' or 'Mrs. Harris,' but we think if any medical man prepared this drugged cocoa, he has incurred a very grave responsibility, for we doubt if any quack preparation at present on sale as a food has had more mis-statements made about it on the package itself and in its advertisements. A label now before us states the following:—

"'Dr. Tibbles' Vi-Cocoa, prepared from cocoa, kola, malt, and hops, all of which are substances of marvellous dietetic value, 6d. per packet.

"'Vi-Cocoa contains malt, one grain of which digests 2,000 grains of starchy food, such as bread, potatoes, etc.

"'Vi-Cocoa contains the tonic properties of hops, so valuable in feeble digestion, which makes Vi-Cocoa as stimulating as good tea.

"'Vi-Cocoa contains a large percentage of the wonderful African kola nut, which has extraordinary sustaining properties, enabling anyone to undergo prolonged muscular or mental exertion, without undue fatigue or AFTER-EXHAUSTION.

"'Vi-Cocoa.—The perfect breakfast, luncheon, "afternoon-tea," and supper beverage.'

"Kola is *not* a food, and it is untrue to say it has a 'marvellous dietetic value,' and those who have carefully studied its properties, since its introduction into this country some few years ago by Messrs. Thomas Christy and Co., are by no means unanimous in considering it a desirable drug. As long ago as January 23 in the present year we pointed out the dangers of kola, saying: 'Kola has been taken up by people who would never enslave themselves to rum or opium, because it is announced as a stimulant without reaction. That is the sheerest nonsense. There must be reaction from the exhilaration of any stimulant. The first effect of kola is hardly noticeable; the man who takes it simply feels refreshed, but after eight or ten hours the heart's action is increased enormously; then, later, in the habitual kola drinker or eater, there is the lassitude, the nervous weakness, and the tremulousness that ensue from over-

drinking; the difference is that with kola the reaction comes on more gradually. It is in the insidiousness of the drug that the danger lies. The important point for the public to bear in mind is that kola is not harmless, but must be used with the same caution as opium or morphine.

"The statements about 'No after exhaustion' are therefore unjustifiable, and it is by no means to the public advantage that drugs producing the effect of over-indulgence in drink can be sold under the guise of Cocoa by grocers, oilmen, corn-chandlers, and others, who know nothing of the dangerous properties of such drugs.

"We question if articles such as this ought not to be amenable to the Stamped Medicines License Acts.

"Genuine undrugged cocoa is in every way a better preparation, as it contains really proved valuable nutrient and stimulating matters. It is to be hoped the legislature will shortly pass such a measure as will put a stop to the sale of substances like Dr. Tibbles' drugged cocoa being sold as 'cocoa.'

"It is bad enough that milk, butter, meat, bacon, confectionery, etc., should be drugged, and it is time the line should be drawn. Only a medical man can determine the conditions under which a dangerous drug like kola should be administered."

OYSTERS AND TYPHOID.

THE Norwich Town Council, in conjunction with the Corporations of Brighton and other towns, has forwarded a memorial to the Local Government Board, urging that a measure should be passed in Parliament conferring on local authorities, in the case of oysters and other shellfish, powers given by the Infectious Diseases Prevention Act in the case of milk—namely, to enable local authorities to prohibit the supply within their district of any shellfish from any pond, river, or place proved to the local authority to be contaminated by sewage, and to order the total closing of any oyster-bed or pond or any shellfish-laying in respect of which a prohibition order has been made by a local authority, and which order has not been set aside by an appeal to the Local Government Board. Such legislation, it is further urged, would be regarded with the greatest satisfaction by a very large portion of the members of the oyster trade. Sir Peter Eade, in supporting the memorial, said it had been demonstrated over and over again that infectious diseases of a certain class, and especially typhoid fever, were communicated by contaminated shellfish. Many medical men, including himself, had had cases of the kind, and where diseases had occurred it was always when sewage from towns was conveyed to places where shellfish were stored before being sent to market. In one of the creeks on the Norfolk coast where shellfish were stored he had himself seen the sewage of the town being discharged over the fish, which were laid there in order that they might be kept and fattened for market.

CAMBERWELL AND ADULTERATION.

AT Lambeth, on October 4, Mr. G. W. Marsden, solicitor to the Camberwell Vestry, appeared in support of several summonses taken out by Inspectors Chadderton, Heath, and Morley, on behalf of that body.—John Middleton, of Bellenden-road, was fined 40s. and costs for selling an admixture of margarine and butter as butter.—Daniel Jones, of Albany-road, was fined 40s. and costs on each of two summonses, one for selling butter containing margarine, and the other for exposing margarine for sale without a label.—David Davies, of Odell-street, was fined 20s. and costs on each of two summonses, the first for selling as butter a mixture of

margarine and butter, and the other for exposing margarine for sale without a label.—F. Smith, of Gibbon-road, who was summoned for exposing unsound fruit for sale, was ordered to pay 15s. costs.—At the instance of Inspector Sargent, on behalf of the Newington Vestry, Harry Saunders, of Deacon-street, was fined 20s. and costs for selling adulterated mustard.

AGRICULTURAL ASSOCIATIONS AND MR. CHAPLIN'S BILL.

AT the widely representative meeting, including delegates from forty dairy and other agricultural associations, held in the Agricultural Hall last week, a resolution was passed, with only one dissentient, declaring the Sale of Food and Drugs Bill, introduced by Mr. Chaplin at the end of last session, "entirely inadequate," and expressing the opinion that no measure will be satisfactory which fails to give full effect to the recommendations of the Food Products Committee, endorsed by the Royal Commission on Agriculture. One of the most important of these recommendations is the appointment of a Court of Reference to decide scientific and technical points, such as standards of purity and the use of food preservatives.

BAD POULTRY.

AT Guildhall, on October 20, Henry Gaspard Fient (trading as Le Bras and Co.), 352, London Central General Market, was summoned, at the instance of Inspector John Leeson, for that he was the person to whom belonged three geese which were, on the 2nd inst., unlawfully deposited in the market for sale, the same being diseased and totally unfit for human food.—Mr. Vickery prosecuted on behalf of the Commissioners of Sewers.—Inspector Leeson on the day in question seized two geese, and took one away from a customer—he having just purchased it for a shilling.—Dr. W. Sedgwick Saunders, Medical Officer of Health, said these geese were foul and stinking.—Mr. Bodkin stated that the defendant would plead guilty, because he was answerable for the acts of his servants, though, as a matter of fact, he knew nothing about it, as he was away on the Continent. The manager (Mr. Mabbs) had given directions that the geese should be destroyed. His orders were not carried out, and a man—who had since been dismissed—sold the geese to which reference had been made.—Mr. Mabbs was called, and justified this statement. In answer to Mr. Vickery, he said he had received many condemnation notes.—The Alderman imposed a fine of £5 and costs, and expressed a hope that more care would be exercised in the future.

THE DANGERS OF MARGARINE.

IN his report to the Foreign Office upon French agriculture, Mr. Austin Lee, commercial attaché at the British Embassy in Paris, says:—

"Since 1884, the date of the development of the margarine industry, the importation of animal fat has increased from 20,139,776 lbs. to 61,348,392 lbs., whilst the export of margarine has fallen from 16,860,091 lbs. in 1892 to 86,398 cwts. in 1896, of which 41,963 cwts., or nearly one-half, was exported to England. The imported animal fat, it is said, may contain deleterious elements, it being impossible to ascertain whether the animals from which it was obtained were healthy or otherwise. A further objection is that the heat now employed in the manufacture of margarine is insufficient to completely destroy disease germs that may be

present. It is estimated that 55,125,000 lbs. of margarine are manufactured annually, of which 44,100,000 lbs. are mixed with butter, the mixture being exported, or sold in Paris as pure butter.

MEAT.

At Guildhall, London, on Oct. 25, Richard Bills, costermonger-butcher, who carried on business at Westmorland-road, Camberwell-gate, was summoned, at the instance of the Commissioners of Sewers, for having in his possession six pieces of beef, four pieces of veal, and eight pieces of pork, intending them for sale as human food, the same being diseased.—Mr. Vickery stated the defendant bought the meat from a salesman in the employ of Mr. Burkett, and it was seized by Inspector Leeson on the carrier's truck just as it was about to be conveyed to the defendant's place of business. It was in a putrid condition.—The defendant bought them at the rate of twopence per pound. Burkett's salesman, on hearing that the meat had been condemned, returned the money to the defendant.—Mr. Sedgwick Saunders, medical officer of health, described the meat as putrid and stinking, and totally unfit for human food.—For the defence it was argued that the defendant, having bad eyesight, depended upon the statement of the salesman as to whether the meat was fit for food. Had the meat arrived at his place of business, he should have closely examined it before selling it. It would not have been exposed for sale until examined.—The Alderman said, after the evidence given for the defence, and after the statements made, he must find that the defendant was guilty; but there were mitigating circumstances, and he would therefore only be fined £5 and costs.

At the Keighley Police-court, on October 22, James Midgley, farmer, Exley Head, was summoned by the Keighley Corporation for preparing unsound meat for sale. Mr. Bagshaw, from the Town Clerk's office, prosecuted, and Mr. Percy Naylor defended.

The proceedings had reference to the carcasses of two calves, which, on September 9, were found at Barker's slaughter-house, Roper-lane. Barker lets part of his premises to various butchers and others. The carcasses were carried before a Justice, who condemned them.—Mr. Bagshaw said that the ownership of the animals was admitted.—Nuisance-Inspector Haller proved the seizure; and Dr. Scatterby, medical officer of health, said that, in his opinion, the meat was unfit for human consumption, being diseased, apparently from tuberculosis and aseptic diarrhoea. The lungs were as hard as leather.

Mr. Robert Armstrong, M.R.C.V.S., confirmed, and said the evidences of tuberculosis were distinct.—Mr. Naylor, in defence, while admitting ownership, contended that no offence had been proved, inasmuch as his client had not been shown either to be the owner at the time of exposure—for there had been no exposure—or the person in whose possession or on whose premises the carcass had been found. Citing *Barlow v. Turrett* (2 Q.B., 1891, p. 107), he relied upon the contention that here there had been no exposure for sale, and that in the absence of such exposure an owner, even though acting with knowledge, could only be made to suffer punishment to the extent of the loss of the meat.—Mr. Bagshaw replied that Section 117 of the Act included within its application the person to whom the carcasses belonged at the time of the preparation for sale.—The Chairman (Mr. Jno. Clough) said he should hold that the carcasses had never left the defendant's possession—and at all events it would only be a case for an amendment of the summons.

The Clerk said the Bench had power to amend, but if Mr. Naylor said he was not prepared to deal with

the amended information, the case would have to be adjourned.—Mr. Naylor said his point was that the wrong man had been sued.—The Chairman (to the Clerk): Does it come under the case cited by Mr. Naylor?—The Clerk: No, not exactly. In that case there had never been any exposure.—Mr. Naylor contended that it had never been suggested in this case that there had been an exposure for sale. His client, he added, had bought the calves at Skipton, and had kept one of them three days and the other ten. They had been fed with new milk from his cow, and had shown no symptoms of disease.—Asquith Wetherall, in defendant's employ, confirmed this statement, and James Crabtree, the butcher who slaughtered the calves, attributed the appearance of the lungs to the effects of cold.

The Chairman said the Bench would amend the summons. They had decided to convict, and pointed out that it was not sufficient for a farmer to send animals to a slaughter-house without having a report as to the condition of the carcasses. They were, however, of opinion that the offence had not been done wilfully. A fine of 10s. and costs in one case only would be inflicted.

Mr. Naylor: Will you be willing to state a case?

The Chairman: Yes, with pleasure.

THE DETENTION OF IMPORTED BUTTER.

THE GRIEVANCE OF MANCHESTER MERCHANTS.

At the ordinary meeting of the Board of Directors of the Manchester Chamber of Commerce, held on Wednesday, correspondence between the Chamber and the Commissioners of Customs, respecting the detention by the Liverpool Customs authorities of United States butter, imported by Manchester merchants from Montreal, was submitted. The packages were marked "U.S.A. Produce," but the authorities refused to release them, pending the production of certain documentary information, the furnishing of which involved delay in the forwarding of a perishable article and in its sale. The Chamber had represented that as the actual source of the butter was correctly indicated on the packages, and as the agricultural produce of the North-Western States is often most advantageously transported through and sold in Canada, there was no reasonable ground for detention. In reply, the Commissioners informed the Chamber that since Montreal is a natural outlet for goods from the North-West of the United States, instructions would be issued to the Customs officers at Liverpool not to detain such goods, under ordinary circumstances, when coming from Canada, on account of their bearing marks indicative of United States origin.

At Otley, on October 22, three cases, under the Food and Drugs Act, were brought before the Bench by Mr. Henry Gamble, Inspector to the West Riding County Council. The defendants were: Edwin Scott, butter factor, of Harden, near Bingley; John Graham, grocer, Yeaton; and S. W. Moore, butter factor, Bramhope. The two former were charged with selling adulterated butter, and Moore with refusing to sell butter to the Inspector.

Mr. H. A. Child represented the defendant Moore, and Mr. Dewhurst the defendant Scott.

Mr. Gamble stated that on September 16 he was on duty near the White Cross, Guiseley, when he saw Mr. Moore selling or delivering some butter from his cart to a man close by. After he had seen one or two boxes delivered he went to Mr. Moore, and told him he wanted to buy a sample of butter out of the box that he was just about to remove. Moore answered, "It is not mine, and I cannot sell you any." At that he carried it into the next cart. Witness said, "Very well, sell

me one out of this box," pointing to another box in Moore's cart. Moore again said, "It is not mine, and I shall not sell you any." He (Mr. Gamble) then said, "Very well. As you know, I am Inspector under the Food and Drugs Act, and I want a roll of butter out of this box with the intention of having it analysed." He offered Mr. Moore 2s. 6d. for the butter, but he again said, "No, I shall not sell you it."

Thos. Shackleton, assistant to Mr. Gamble, and Fred Scott, of Keighley, gave corroborative evidence. The latter added that Moore said that Mr. Gamble could have some butter out of Scott's cart, but not out of his own cart.

Mr. Child said he thought the County Council would have well advised their inspectors not to intrude this case before the Otley Bench. His client was charged, not with adulteration, but with refusing to sell to the inspector. Mr. Moore had sold the butter to a man named Scott, of Keighley, and had brought it—three cases of it—to Guiseley to deliver to Scott by arrangement. This officious inspector, who had been on Mr. Moore's track for a number of years, came upon the scene, and said, "I want a sample of butter." His (Mr. Child's) client said, "I cannot give you one; it is not mine." Mr. Moore, however, offered to let the inspector have a sample out of another box in his cart, but this the inspector refused to take, having got his eye fixed on a certain box. This was not an after-thought-out defence. It was admitted by the prosecution that at the very outset the defendant said the butter was not his, and that he had nothing to do with it.

S. W. Moore, the defendant, said he offered to give the inspector a sample out of the other boxes. He was prepared to hand over any sample of butter which he had not disposed of.

In reply to the Bench, Moore said Scott did not pay for the butter, but he had not paid for what he had got a week or two before that.

The Chairman said the Bench reserved their decision in this case until they had heard the others.

Edwin Scott, butter factor, of Harden, near Bingley, was charged with selling adulterated butter at Guiseley.

Mr. Gamble stated that on the day already named, after he had seen the transactions indicated in the previous case, he went to Mr. Scott and said, "You will be selling this butter?" Scott said, "Yes, I shall sell it." He said, "Let me have a roll, will you?" The defendant said he would, and let him have a roll, for which he paid 1s. 3d. When he had got possession of the butter, he explained to the defendant that he wanted it for the purpose of having it analysed, and offered to divide the sample into three. The defendant accepted this offer. One of the three divisions he (Mr. Gamble) sent to Mr. Allen, the public analyst, who in his certificate said, "I am of opinion the said sample consisted of margarine as defined by the Margarine Act of 1887. It contains not more than 35 per cent. of real butter. The sample was analysed before any change had taken place in the constitution of the article that would interfere with the analysis."

Thos. Shackleton corroborated Mr. Gamble's statement.

The defendant stated that so far as he knew he was getting good butter from Mr. Moore, as he was giving full price for it. He had only got two cases into his cart when the inspector came up, and the sample which he got came out of a third box which had not got into his (Scott's) cart. He did not give the butter to the inspector, but the latter himself took it out of the box. He told the inspector it was not his butter, but the inspector pressed him to name a price, and eventually he did so. He got the money, but afterwards gave it to Mr. Moore.

Fred Scott, the defendant's son, and Thomas Scott gave similar evidence, the first-named adding, in reply

to Mr. Gamble, that the sample given to him by the inspector went back to Mr. Moore's cart.

Mr. Dewhurst addressed the Bench on behalf of Scott, pointing out that his client, who bore a good character in the district where he lived, was innocent of all intention of selling any adulterated butter. The butter which the inspector got was Mr. Moore's, and all that his client was guilty of was that he was the channel through which the money was paid by the inspector to Moore.

In Graham's case, Mr. Gamble said the sample which he bought, and for which he gave 1s. 10d., was certified by Mr. Allen, the analyst, to consist of margarine, and did not contain more than 20 per cent. of real butter.

Mrs. Graham pleaded guilty to the charge, but said she bought the butter from Mr. Moore on the same day that she sold it to Mr. Gamble.

The Chairman said the Bench came unanimous to these conclusions:—Moore would be fined £10 and costs; the case against Scott would be dismissed, and Graham would be fined 20s. and costs.

THE UNIVERSITY COLLEGE HOSPITAL: A STUDY IN TYPHOID-DISTRIBUTING HYGIENE.

AMONGST other things taught at University College are hygiene and public health, for the correct exposition of which Professor Corfield, medical officer of health, St. George's, Hanover Square, is responsible. In a work before us on Dwelling Houses, Professor Corfield points out that it is not necessary to have cisterns or receptacles of any kind for the storage of drinking water, where there is a constant supply, and yet in the head-quarters of the High Priest of Hygiene we find sixteen or more of the nursing staff stricken with typhoid through this very insanitary practice of using cisterns.

The nurses, it appears, have lately had to have a new dining-room, and thereby a new water supply. On examining the water pipes they were found to communicate with a cistern in the slop-closet belonging to Ward 1, and, on further investigation, it was discovered that the contents of this were contaminated by means of a connection with the tank in which the soiled linen of typhoid patients was soaked before being boiled.

It would be hard to picture a condition of things more discreditable for the hospital authorities than this. In private dwellings ignorance may be a plea, but at University College Hospital there is no excuse possible. After so grave an exposure the safety of students and staff alike demand that water for drinking purposes be separately supplied through Pasteur pressure filtration.

HOLLAND COUNTY COUNCIL AND THEIR ANALYST.

At the quarterly meeting of the Holland County Council, Colonel Moore, C.B., presiding, the quarterly report of the public analyst, Mr. C. E. Cassal, of London, stated that the number of samples submitted for analysis during the quarter was twenty, of which seventeen were genuine, one adulterated, and two inferior. The adulterated sample was of butter, and contained 50 per cent. of margarine. The inferior samples were one of butter and one of ginger. Superintendent Costar was appointed an inspector under the Food and Drugs Act, in succession to Superintendent Crawford, resigned.

A letter was read from the Board of Agriculture, adhering to their decision not to sanction the appoint-

ment of Mr. E. W. Bell, of Spalding, as District Agricultural Analyst. The Council unanimously resolved not to make any other appointment, and to again submit the name of Mr. Bell to the Board of Agriculture, the action of the Board being regarded as an attempt to foist a London analyst upon the Council.

SIR R. THORNE-THORNE ON DISEASE GERMS.

At the inaugural meeting of the Midland Medical Society, Sir Richard Thorne-Thorne delivered an important and suggestive address on "Soil and Circumstance in their Control of Pathogenic Organisms." He began by calling attention to the fact that whilst certain infective diseases tend to recur at intervals in given localities, in others the same diseases showed no such tendency. Certain individuals also were peculiarly susceptible to infection, whilst others were practically immune. These infective diseases were due to the reception into the system of special minute organisms, which depended for their vitality on their surroundings. Certain districts were quoted as showing a permanently high mortality from certain fevers, especially typhoid. Thus, the county of Durham for the last quarter of a century had consistently shown a higher mortality from typhoid than the rest of England. Certain towns were notorious as being rarely free from typhoid, whilst in others in the same vicinity and of similar size and general character the disease seldom obtained a footing. The conditions known to be unfavourable to the growth of the typhoid bacillus were direct sunlight, prolonged immersion in water, extremes of temperature, and absence of suitable food. It had long been surmised that certain soils were favourable and others inimical to the growth of these germs, and recent scientific experiments had been carried on by Dr. S. Martin at the suggestion of himself, and he had proved certain porous soils from the neighbourhood of human dwellings, rich in organic matter, retentive of moisture, were capable not only of preserving for many months the typhoid bacillus alive, but of enabling it to thrive and multiply. Other soils proved to be incapable of supporting the life of the organisms. Coming to the practical application of these facts, the lecturer pointed out the importance of preserving in a healthy state the soil around human dwellings, and laid special stress on the necessity of paving small open spaces with some impervious material. He vigorously condemned the open midden system which still prevailed in many large towns, and which fostered all the conditions favourable to the growth of disease germs. This system, as degraded and ignoble as it was foul, formed one of the greatest blocks to sanitary progress in these days. Summer diarrhoea had been shown to depend on a germ which flourished in the superficial layer of the soil, and its development was favoured by the use of subsoil water and a temperature of 56 degs. Fahr. at a depth of four feet. Milk exposed in dirty pantries in crowded neighbourhoods conveyed the germs into weakly children. The importance was urged of the natural feeding of infants. When cow's milk had to be used it should be sterilized by boiling. The normal tissues of the body did not form a favourable soil for the growth of disease germs, but if the vitality of the tissues were depressed then the germs flourished. The lecturer gave as illustrative of this truth the different effects of the germ of diphtheria and tubercle on different individuals. Insanitary conditions in the absence of the special germ gave rise to diphtheria, and the germ would not cause diphtheria when it fell on a sound and healthy soil. Certain conditions of the throat specially favoured the development of the germ—namely the condition of the throat left by scarlet fever and the inhalation of sewer gas.—On the proposition of Dr. Alfred Hill, seconded by Dr. Barling, a hearty vote of thanks was passed to the lecturer.

GROCERS' "MISTAKES."

At Acock's Green Police-court, on October 26, before Messrs. William Barwell and W. P. Hoskins, Messrs. Herbert and Co., Warwick-road, Greet, were charged with selling coffee not of the nature and quality demanded by the purchaser.—Acting under the instructions of Police-sergeant Griffin (inspector under the Act), a woman named Miriam Stonnell went to the shop of the defendants on September 21 and asked for half-a-pound of coffee, for which she paid 5d. In answer to a question, she said that the coffee was supplied to her by defendants' manager, and was wrapped in a plain piece of paper. Sergeant Griffin met her at the door as she was coming out of the shop, and informed defendants' manager that it was for the purpose of analysis. He sent the sample to the public analyst at Worcester, whose certificate proved that it contained 65 per cent. of chicory.—For the defence it was contended that the coffee was supplied in mistake, a mixture of coffee and chicory having been accidentally placed in the "bin," or canister, usually reserved for pure coffee.—The Bench fined defendant 10s. and costs.—Edward Martin Bayliss, 31, Percy-road, Greet, was charged with selling coffee adulterated with 60 per cent. of chicory.—He pleaded guilty, but said it was a mistake, and was fined 10s. and 11s. 6d. costs.—Sidney Bailey Wood, grocer, Coventry-road, Hay Mills, was charged with selling butter adulterated with 6 per cent. of foreign fat.—His defence was that a new apprentice sold the butter by mistake.—Defendant was fined 5s. and 11s. 6d. costs.—Thomas James Comley, grocer and baker, Coventry-road, Hay Mills, was charged with selling butter adulterated with 12 per cent. of foreign fat.—He pleaded that he bought it as pure butter, and in good faith sold it as such; but was fined 2s. 6d. and 11s. 6d. costs.—Mary Reppingham, grocer, Warwick-road, Greet, was charged with selling butter adulterated with 30 per cent. of foreign fat.—Her defence was that by an oversight the butter had got on the wrong slab.—She was fined 5s. and 11s. 6d. costs.

THE ADULTERATION OF FLOUR.

THE *British Baker and Confectioner* says:—"The adulteration of flour in the United States has made such progress that the St. Louis millers have brought a Bill into the State Legislature for its abatement. Supporting this measure the other day, the State Governor, Mr. E. O. Stanard, thought this was a most important subject. If the Bill, which had been presented by the St. Louis millers, were not a sufficient safeguard, it might be amended, or some suggestion made for the presentation of a better Bill to Congress. But he considered that it was necessary to have some national legislation. American millers had been considering how greater facilities might be obtained for the distribution of American milling products throughout the world. That was a matter of great importance, but they all knew that for the last few years there had been a great deal of mixing of maize flour, ordinarily sold as corn flour, with wheat flour. There was nothing more generally and absolutely known than the work which was being done by the millers relative to mixing maize flour with wheat flour. There was no miller but knew from his own experience that the price of flour had been reduced anywhere from thirty to sixty cents. per barrel over a very large proportion of that country, due to the fact of that mixture. It might be said if Americans did not mix maize and wheat it would be mixed on the other side of the ocean. It might be there were men as dishonest on the other side of the ocean as in the States. He believed that was so, but he did not believe that the mixture of flour with maize meal or maize meal

with flour would be tolerated there in any marked degree, and their reputation would suffer there as much as upon the American side of the Atlantic. Now, as to the man who went into the mixing business. While it paid at first, it was not paying now; they got into each other's habits and cut it down, so that the mixers were scarcely able to make any money in their works, but if they were not making any money, what were the millers doing that were making straight flour—what could they do? It were well if they advertised not only to the dealers, but to the consumers who were deceived, that certain parties were mixing 10 to 45 per cent. of corn flour with their wheat flour. Blending did not cover the case. Blending meant mixing spring wheat with winter wheat; it did not mean mixing maize with wheat. His experience led him to believe that, although many men who were mixing maize flour with wheat flour told the purchaser that it was mixed, there was no information yet that the consumer who bought it secondhand had been informed, or would be informed, as to what the flour was made of.

SUPPOSED LEAD POISONING.

THE tendency of the water supplied to the Urban District of Mirfield by the Huddersfield Corporation to take up lead is likely again to be inquired into, this time in connection with an inquest which was held on October 27 as to the death of Godfrey Walker (54), Upper-Row, Mirfield, which occurred on the previous Sunday night. The deceased, who by trade was a house painter, had for three years or so been in delicate health, and under the care successively of several medical men. Lately he had been an out-patient at the Huddersfield Infirmary, where he was treated for lead poisoning. On the Friday before his death, when returning home, he became faint and had a fit. He was taken home and put to bed, but no doctor was called in until the Sunday, for his dangerous condition was not suspected, and death took place before the doctor could arrive. Far a long time there has been much uneasiness in Mirfield about the water supply.

LEAD POISONING IN THE POTTERIES.

A CORONER ON BOY LABOUR IN LEAD.

THE death of Arthur Capewell, 14, son of James Capewell, a potter's kilnman, has formed the subject of a Coroner's inquiry at Hanley.—The boy was taken to work with his father one month after attaining the age of 13. For about three months he worked at the kilns and was then transferred to the dipping house, where lead is used. About a month ago, he went back to the kilns because he had lost his appetite, was frequently sick, and looked pale. On Friday last he was taken ill, and on Sunday he was seized with a fit of convulsions, and he died the same day.—The father stated that when the boy commenced work he was strong and healthy, and he duly passed the doctor before going into the dipping house.—Dr. Phillips said that lead poisoning, causing paralysis of the cerebral system, was the cause of death.—The Coroner (Mr. W. Huntbach) said the case was in his mind a most serious one. It was a lamentable thing that a boy of such tender years should have been put to such a dangerous occupation. He intended to send a copy of the evidence to the Home Office.—The jury after considerable discussion brought in a verdict in accordance with the medical testimony, and several jurymen expressed an opinion that boys should not be allowed to work in lead so early in life.

WHAT IS GROUND GINGER P

AT Glasgow, on October 21, Peter D. Wighton, grocer, Stockwell-street, was charged before Sheriff Fyfe, at the instance of the sanitary authorities, with having sold to Inspectors Hamilton and Armstrong $\frac{1}{2}$ lb. of ground ginger which was found to contain 69 per cent. of spent or exhausted ginger. He pleaded not guilty, and his defence was conducted by Mr. William Borland, writer. Evidence having been given by the two inspectors, Mr. Tatlock, one of the city analysts, stated that the article in question had very little smell or taste of ginger. Spent exhausted ginger was ginger which had been acted upon by some solvent for the purpose of abstracting its essential properties. The essential constituent that had been extracted was oil of ginger, which was used for the manufacture of ginger beer.

William Robert Lang, senior assistant to the professor of chemistry in the Glasgow University, said that from his examination of Mr. Tatlock's report he would be inclined to say that the ginger in question was of poor quality. It was quite impossible to determine whether spent ginger had been added to the ordinary ginger.

By Mr. Lindsay: Although the ginger in question was of exceeding poor quality it was genuine ginger.

Having commented upon the analytical evidence, Sheriff Fyfe said he could not hold in that particular case that the ginger was not of the substance and quality of ground ginger, and found the charge not proven.

BUTTER.

AT Glasgow, James Trotter, grocer, 235, Dalmar-nock-road, was charged before Sheriff Fyfe, in Glasgow Sheriff Summary Court, on October 21, with having on Thursday, July 8, exposed margarine for sale without having attached to the kit the necessary label. Respondent pleaded guilty, and said that the kit was put into the window only that morning, and the ticket was so obliterated that it was not easy seeing what was on it. He was getting others printed. A fine of 10s. with 30s. of expense was imposed.

AT Greenwich Police Court, John Henry Milligan, of Old Kent-road, pleaded guilty to selling as butter a substance containing 77 parts of margarine, and was fined 40s., and 2s. costs.

DRUGS.

AT the Spittlegate (Grantham) Petty Sessions, Richard Steele, druggist, of Colsterworth, was summoned under the Sale of Drugs Act, 1875, for selling, on the 21st ult., to the prejudice of the purchaser, a quantity of sweet nitre which was not of the proper quality and strength. The evidence was to the effect that a sergeant purchased threepenny worth of spirits of sweet nitre at the defendant's shop, telling him he wanted it for analysis. The nitre was divided, and a portion sent to the Public Analyst, who had certified that it was 80 per cent. deficient of the active principle of nitrous ether. For the defence it was contended that the sergeant was supplied with what he asked for. Mr. Robinson, solicitor, said the article was analysed as nitrous ether, instead of sweet spirits of nitre.—The Bench decided to dismiss the case.—There were two other cases on precisely the same lines, and these the Bench also dismissed, without hearing any evidence.

THE LOCAL GOVERNMENT BOARD'S REPORT ON THE SALE OF FOOD AND DRUGS ACT, 1875.

THE number of cases in which we have approved of the appointments of analysts under the Statutes 35 and 36 Vict. c. 74, and 38 and 39 Vict. c. 63, is as follows:—

| | | | | |
|--|-----|-----|-----|-----|
| Administrative Counties | ... | ... | ... | 61 |
| County Boroughs in which appointments have been made under sec. 10 of the latter Act | ... | ... | ... | 61 |
| County Boroughs in which arrangements exist under sec. 11 of the latter Act | ... | ... | ... | 3 |
| Non-County Boroughs, with a population of over 10,000, under sec. 10 of the Act | ... | ... | ... | 70 |
| Non-County Boroughs, with a population of over 10,000, under sec. 11 of the Act | ... | ... | ... | 2 |
| The Commissioners of Sewers of the City of London | ... | ... | ... | 1 |
| Vestries and District Boards of Works in the County of London | ... | ... | ... | 40 |
| Total | ... | ... | ... | 238 |

ANALYSES.—The result of the analyses made during the year is shown in the abstract shown at page 628. The total number of analyses made was 43,962 (one to every 661 of the population of 1891), an increase of more than 4,400 over the number made in 1894. In London one sample was obtained for every 414 persons, and in the provinces one for every 736. There are still, however, many places in which either no samples or a very insignificant number are taken. In 13 boroughs, including Tynemouth with a population in 1891 of 46,588, and Southport (population 41,406) not a single sample of food or drugs was obtained for analysis, while within the jurisdiction of the County Councils of 11 counties, with a total population of nearly 900,000, and in 12 boroughs, with a total population of nearly 700,000, there were in all only 313 samples analysed. The result of this indifference on the part of the local authorities is seen in the fact that out of these 313 samples, no less than 56, or about 18 per cent., were condemned, a proportion nearly twice as high as obtained in the rest of the country.

PROSECUTIONS.—The statutory reports which we receive from the Authorities are copies of those made by the analysts, and show only the number and description of the samples analysed, with the results of the examinations, without including any particulars of prosecutions; but we have thought it well to ascertain, as regards the samples reported against, in how many instances proceedings were actually instituted and what penalties were inflicted. It appears that 4,093 samples were reported by the analysts as adulterated, and that prosecutions were instituted in respect of 2,724, fines being imposed in 2,313 cases, amounting in the aggregate to £4,136 8s. 3d., excluding costs in most instances. The average penalty was thus £1 15s. 9d. In the case of one trader fines amounting to £55 were

imposed in respect of several samples of adulterated butter under the Margarine Act and the Sale of Food and Drugs Acts. There were also in particular cases fines of £35 and £25 for offences against the Margarine Act. Fourteen fines were of £20 each; 7 between £10 and £20; 45 of £10 each; 20 between £5 and £10; and 163 of £5 each. Over three-fourths of the fines, however, were of £2 or under, 201 being under 5s.

The following table shows the number of samples examined during the year, and the percentage of cases in which adulteration was reported.

| | No. of Samples in 1895. | | Percentage adulterated in | |
|-----------------------|-------------------------|--------------|---------------------------|-------|
| | Examined. | Adulterated. | 1895. | 1894. |
| Milk | 18,307 | 2,030 | 11.1 | 11.5 |
| Bread | 575 | 10 | 1.7 | 1.4 |
| Flour | 334 | 0 | 0.0 | 0.0 |
| Butter | 7,186 | 590 | 8.2 | 10.4 |
| Coffee | 2,046 | 204 | 10.0 | 10.4 |
| Sugar | 353 | 6 | 1.7 | 7.3 |
| Mustard | 801 | 48 | 6.0 | 5.8 |
| Confectionery and jam | 370 | 4 | 1.1 | 2.0 |
| Pepper | 1,599 | 8 | 0.5 | 0.6 |
| Tea | 443 | 0 | 0.0 | 0.2 |
| Lard | 1,663 | 26 | 1.6 | 5.4 |
| Wine | 48 | 4 | 8.3 | 2.0 |
| Beer | 330 | 7 | 2.1 | 6.2 |
| Spirits | 4,241 | 702 | 16.5 | 17.7 |
| Drugs | 1,439 | 158 | 11.0 | 11.2 |
| Other articles | 4,227 | 296 | 7.0 | 9.0 |
| Total | 43,962 | 4,093 | 9.3 | 10.3 |

From the above table it will be seen that the proportion of adulterated samples was only 9.3 per cent. of those examined, which is 1 per cent. lower than in 1894, and the lowest percentage of adulteration since the passing of the Sale of Food and Drugs Act, 1875.

MILK.—Milk continues to be the chief subject of analysis. Out of the 43,962 samples analysed, 18,307 were of milk, and of these, 2,030, or 11.1 per cent. were condemned. In judging of milk, the public analyst is often obliged to pass samples which are equal in composition to only the poorest of genuine milk, although he may strongly suspect that he is dealing with samples artificially and not naturally weak. The difficulty of repressing milk adulteration is much increased by the practices of certain dealers, who, by the skimming of cream, or the addition of "separated milk" to milk of excellent quality, succeed in lowering the quality of the article, so that it just comes up to the requirements of the analyst. In this connection it may be noted that in addition to the 2,030 samples which were condemned, there were nearly 400 which barely reached the analyst's low standard, but were passed as "very poor," "of doubtful genuineness," &c.

We have before observed that in respect of milk adulteration London compares very unfavourably with the rest of the country. In 1895, the proportion of

adulterated samples of milk in the Metropolis was as 19·3 per cent., as against 6·6 per cent. in the 32 great towns of England included in the Registrar General's Weekly Returns, and 9·4 per cent. in the counties and remaining boroughs. In different parts of London, the percentage of adulteration varies considerably. In five districts, the samples condemned were less than five per cent. of those examined, while in 11 others more than one-third of the total number of samples analysed were reported against. But it is only with regard to milk that London is at this disadvantage. If milk is excluded, London is found to have a slightly lower rate of adulteration than the rest of the country. Concerning the difficulty of dealing satisfactorily with milk in the Metropolis, the analyst for the parish of Paddington states:—"Numerous hawkers owning no property in the parish, and paying no rates, flood this and other parishes with adulterated milk. They sell from barrows on which are painted the names of various high-sounding dairies. Each time they are prosecuted they change these names. Besides swindling the purchasers, they do great harm by this unfair competition to the dairymen residing in the parish. Only substantial fines are likely to put a stop to this."

There were 72 samples of condensed milk examined, of which three were condemned. Some of the samples passed as genuine were sold under the name of "condensed skim milk," and from these it was found that on an average nine-tenths of the cream had been abstracted.

Condensed whole milk has long been successfully used as a food for infants, but the manufacturers of such inferior articles do much to bring the trade into disrepute.

Legal proceedings were taken against the vendors of 1,305 out of the 2,030 samples of milk reported against, and in 1,121 cases penalties were imposed, amounting to £2,191 8s. There were 89 fines of £5 each; 10 between £5 and £10; 27 of £10 each; 3 between £10 and £20; and 12 of £20 each; but against these fairly substantial fines must be set the remaining 980, of which over 150 were of 5s. or less, including several of 6d. each.

BREAD AND FLOUR.—Of 909 samples of bread and flour examined, 10 (of bread) were reported against. Nine penalties were imposed, amounting in all to £7 7s. 6d.

BUTTER.—Butter, or what was sold as butter, was the subject of analysis in 7,186 cases, 590 being condemned. This gives a percentage of 8·2, which is considerably lower than in any previous year. The majority of the 590 samples were condemned on account of their being wholly margarine, or of being mixed with margarine in different proportions. A few were reported against because they contained an excess of water, but in the absence of any standard, some samples which contained over 20 per cent. of water were passed as genuine. Proceedings were taken in 559 cases, 475 fines were inflicted, amounting in all to £1,116 8s. There were 44 fines of £5 each; 6 between £5 and £10; 13 of £10; 4 between £10 and £20; 2 of £20; and one each of £25, £35, and £50, these higher fines being the result of proceedings under the Margarine Act.

COFFEE.—Of the 2,046 samples of coffee examined, 204, or 10 per cent., were condemned. In 141 of these cases the proportion of added chicory was at least 40 per cent., a few of the samples being almost entirely chicory, though one of these was being sold at the rate of 1s. 6d. a pound. There were 135 prosecutions, and 119 fines were inflicted, amounting in all to £157 17s., only 8 of them being of £5 and upwards.

SUGAR, MUSTARD, CONFECTIONERY, AND JAM.—Of the

353 samples of sugar examined, only 6 were reported against; of mustard, 801 samples were taken, and 48 condemned; while of confectionery and jam, 4 samples were condemned out of 370 analysed. A few small fines were inflicted in respect of these articles.

PEPPER AND LARD.—There were 1,599 samples of pepper analysed, but only 8 were found to be adulterated, while of the 1,663 samples of lard 26 were reported against. This contrasts favourably with the reports of a few years ago, when both pepper and lard were found to be extensively adulterated. Fines were inflicted in two cases of pepper and four of lard.

WINE AND BEER.—Only 48 samples of wine were examined, four being condemned. One home-made wine was found to contain lead in sufficient quantity to be injurious to health, the lead being in all probability derived from the glaze of an earthenware vessel. Out of 330 samples of beer, seven were reported against. The few proceedings ordered in respect of wine and beer were dismissed.

SPIRITS.—4,241 samples of spirits were examined, and 702, or 16·5 per cent., were condemned. This shows a slight improvement on previous years, but the diminution in the rate of adulteration is exceedingly slow. It is true that a number of the adulterated samples contained only a small percentage of water beyond the quantity allowed by the Sale of Food and Drugs (Amendment) Act of 1879, but the reports show that in many cases larger quantities of water are added, one sample of rum in particular having been diluted to 51 per cent. under proof. This sample was regarded by the analyst as composed of two-thirds rum at the minimum legal strength (25 per cent. under proof), and one-third of added water, so that the publican had not only watered the proof spirit down to the lowest legal strength, but had thereupon added to the mixture half its bulk in water. It is interesting to note that the percentage of adulterated spirits in London was only 10·2, as against 17·6 in the rest of the country. Legal proceedings were instituted in respect of 448 of the 702 samples condemned, and 390 fines were inflicted, amounting to £491 7s. 3d. Only 21 of the penalties were of £5 and upwards.

DRUGS.—There were 1,439 samples of drugs examined, and 158, or 11·0 per cent. were reported against. The principal drugs condemned were nitre, with 39 out of 123 samples, and rhubarb, with 33 out of 195. Proceedings were taken in 69 cases, and 57 small fines were inflicted, amounting in all to only £27 1s. 6d. Apart from one fine of £5, the average of the fines was about 8s.

MISCELLANEOUS ARTICLES.—Of the articles not specified by name in the table, 4,227 samples were analysed, and 296, or 7 per cent., were condemned. The principal were: Ginger, 61 reported against out of 855; cocoa, 56 out of 182; vinegar, 23 out of 375; beeswax, 23 out of 52; cheese, 19 out of 597; and oatmeal, 13 out of 514. There were 152 prosecutions in respect of miscellaneous articles, and 114 fines were imposed, only 9 of these being of £5 and upwards.

SAMPLES FROM PRIVATE PURCHASERS.—Of the 43,962 samples analysed in 1895, 43,300 were obtained by the officers of local authorities. 167 were taken by private purchasers, and of these as many as 50, or 39·9 per cent., were condemned. The remaining 495 were taken by an inspector of the Royal Lancashire Agricultural Society under an arrangement by which samples taken on behalf of this society are analysed by the county analyst, free of charge to the Society. The 405 samples were mostly of milk and butter, and 50 of them, or 10·1 per cent., were condemned.

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Food and Sanitation.

SATURDAY, NOVEMBER 6TH, 1897.

MEDICAL MAGISTRATES AND MILK.

MEDICAL men more than any other occupants of the bench of magistrates ought to know the great importance of pure milk, and it is therefore very disappointing to find from time to time cases wherein they seem to fail in recognising that if their unprofessional brethren are inclined to be led astray, medical magistrates can do much to counsel rightly. We take a case in point heard the other day at Beccles, where a milk contained:

Fat, 2·12 per cent.; solids not fat, 8·62 per cent. The analysis was not disputed, and obviously the milk was one which, in the public interest, should not be regarded as other than adulterated.

The facts, as stated in court, were that:—"William Hacon, cowkeeper, Hulver, appeared to an adjourned summons charging him with selling adulterated milk to P.C. Baldry.—The case was adjourned for the attendance of Mr. Napier, the county analyst, who certified that the sample of milk contained 80 per cent. of new milk and 20 per cent. skim.—The Chairman asked him if he was absolutely certain, when milk got down to this low standard, that it had been tampered with?—Witness: It had certainly been tampered with.—In further reply to questions by the Bench, the Analyst said he could detect difference in the milk produced by inferior food. It was possible that milk might be affected by disease in the cow, and in this case he knew nothing of the cow. There was a limit in the standard adopted by Somerset House and the Society of Public Analysts, and in making his analysis he had regard to that fact.—Mr. Crowfoot, a medical magistrate, asked witness if he did not think it possible the absence of fat was due to the condition of the cow?—Witness did not think so.—Mr. Rix asked for an authority, and witness said he had never come across a genuine sample of milk which gave a value of less than 2·75 per cent. of fat. He had analysed hundreds of samples.—The Chairman: You don't judge from the actual deterioration, you only find that the milk had so much less fat in it? You can't determine whether this is due to poor food or from anything the matter with the cow, or anything done by criminal manipulation?—Witness: I say fat has been abstracted.—Mr. Smith: Are the total solids less?—Witness: Fat has been abstracted. Not only had 20 per cent. fat been abstracted, but I say there had been a little water added as well.—Mr. Crowfoot said that would have diminished the amount of solids. The addition of skim milk would increase the solids, the addition of water would diminish them.—Witness: I can't tell you that water has been added officially, but that is my private opinion.—The Bench were not satisfied, and dismissed the case."

It passes us to understand why the Bench were not satisfied, seeing that, even compared with the low standard of Somerset House, it was 0·63 per cent. too low in fat. It is obviously unfair that such milk should be sold as genuine, and, milk forming the principal food of infants, a medical magistrate ought to be the first to point out the danger of encouraging the sale of such milk as genuine.

WATER AT BUTTER PRICE.

AT Abbeyfeale Petty Sessions, Sergeant Kennedy summoned Michael Ahern for disposing of butter containing 20·69 per cent. of water.—Mr. Dalton: Only a shade over.—Mr. French: A very wide shade. Defendant always sold to the best buyers in the market.—Fined 10s. and costs.

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THE STRAND CHIEF INSPECTOR RECEIVING AN INCREASE OF SALARY.

MR. GAMBLE (chairman of the General Purposes Committee) brought up a report, recommending that the salary of Senior Sanitary-Inspector Strutt should be increased from £186 to £200 per annum. This was agreed to, the Chairman observing that Mr. Strutt performed his duties to their entire satisfaction.

A SANITARY INSPECTOR SUSPENDED.

At Battersea, the sub-committee had presented an interim report to the effect that having regard to charges made against Mr. T. H. Freeman, inspector for No. 2 district, which he had practically admitted, they (the sub-committee) "were of opinion that he is not a fit and proper person to perform the duties of a sanitary inspector." In accordance with the recommendation of the sub-committee, the Medical Officer had suspended Mr. Freeman. The Health Committee asked the Vestry to approve this action, and to continue the suspension till the conclusion of the inquiry.

MARGARINE.

At Salford, on October 29, before Mr. J. Makinson (stipendiary), summonses were heard against Patrick McDonnell, wholesale provision dealer, 80, Vernon-street, Bolton, alleging that he sold a quantity of margarine which was not printed or durably marked "margarine," as required by the Margarine Act, 1887, and that he sold margarine for butter. Mr L. C. Evans (Deputy Town Clerk) appeared in support of the summonses. It appeared that the defendant supplied butter to small provision dealers in Pendleton, from one of whom Inspector Crossley (Nuisance Inspector) obtained samples of butter which was sold to him by the defendant. The stuff was analysed and found to contain a hundred per cent. of margarine. The inspector watched the premises, and on the 5th inst. saw the defendant in the act of delivering goods. He purchased $\frac{3}{4}$ lb. of butter from him for 9d., which was afterwards found to be margarine. The defence was that McDonald had only been in the business for a few months, and that when he sold the butter he had no reason to believe that it was adulterated.—Mr. Makinson inflicted a fine of £5 and costs for the offence of selling margarine as butter, and another fine of 10s. and costs upon the other summons.

At Bow-street, on October 27, John Walker, 21, Little Earl-street, appeared to a summons, issued at the instance of the St. Giles's Board of Works, charging him with selling butter containing 75 per cent. of foreign fat. A second summons charged him with selling margarine without a margarine label.—Mr. H. C. Jones supported the summonses on behalf of the Board.—The defendant admitted that the offence had been committed by his shopman, but pleaded that they were cleaning the shop when the samples were purchased. The butter and margarine appeared to have been put together, and the shopman in mistake supplied the wrong article.—Sir James Vaughan ordered defendant to pay 20s. fine and 4s. costs.

At Leeds, on October 27, before the Stipendiary Magistrate (Mr. C. M. Atkinson), John Carney, provision merchant, carrying on business as "The Bacon King" at No. 44, High-street, Quarry Hill, Leeds, was fined £5, with the option of one month's imprisonment, for exposing margarine for sale, there not being attached thereto a label clearly visible to the purchaser marked "Margarine" as required by Section 6 of the Margarine Act, 1887. The Town Clerk (Mr. John Harrison) prosecuted on behalf of the Corporation, and Inspector Walker proved the case.

A PTOMAINÉ POISONING CASE.

At Birmingham County Court, on October 27, before His Honour Judge Whitehorse, Q. C., an application was made by the plaintiff in the case of Read v. Bird, both of Sun-street, for judgment to be entered for the plaintiff.—Mr. McCardie appeared for the plaintiff, and Mr. Cross for the defendant.—This was the ptomaine poisoning case, in which the plaintiff claimed damages from the defendant, who is a butcher, for negligently supplying him with meat which poisoned his family. The jury had already found for the plaintiff for £3 10s., but judgment had not been given.—Mr. Cross argued that there was no evidence of negligence by the defendant or his servants. There was nothing to show that the meat was bad, or that the pickle was improper.—His Honour said there was distinct evidence that the vat in which the meat was pickled was in a filthy state, and that the pickle was foul.—Mr. Cross replied that there was no duty imposed on the defendants to pickle the meat. The sale was completed before the meat was pickled. It was put in pickle at the request of the plaintiff, merely as a friendly act, for which there was no reward. Plaintiff must prove culpable negligence.—His Honour: Surely it is the law that if I volunteer, whether on your request or not, to do a service for you, and I do it so negligently as to inflict injury on you, I am responsible.—Mr. Cross: But it must amount to gross negligence.—His Honour said he thought there was evidence before the jury of gross negligence, and he therefore gave judgment for the £3 10s. and costs on the amount sued for.

HERTFORDSHIRE AND ADULTERATION.

THE quarterly report of Mr. A. E. Ekins, the analyst appointed for the county of Hertford, states that during the quarter ended Sept. 30, 1897, 44 samples of food were submitted as follows: 14 samples of milk, 16 samples of butter, 2 samples of whiskey, 3 samples of bread, 2 samples of coffee, 2 samples of lard, 2 samples of ginger, 2 samples of sugar, 1 sample of brandy. Of these, three samples of milk and three of butter were adulterated, and two samples of milk were of poor quality. In every case in which legal proceedings have been instituted the vendor has been fined. In two cases of milk adulteration in which the percentage of added water was not very high the vendors were cautioned and legal proceedings were not taken.

POOR MILK AND WORSE BUTTER.

RICHARD MORGAN, trading as Morgan and Company, and carrying on business at 155, Commercial-road, Whitechapel, and 77, Carlton-street, Kentish Town, was summoned at Marylebone, on October 26, by and St. Pancras Vestry, for selling as butter an article which contained 90 per cent. of foreign fats, the retailing milk which was adulterated with water to the extent of 16 degrees.—Mr. Plowden imposed a fine of £5, with 13s. 6d. costs, on the first summons, and 20s., with 13s. 6d. costs, on the second.—George Stafford Thorpe, of 12, Seymour-street, St. Pancras, was fined 20s., with 13s. 6d. costs, for selling milk which was adulterated with water to the extent of 21 degrees. He admitted having been previously fined 10s. for a similar offence.

A FRIED FISH SHOP ADJUDGED A NUISANCE.

IN the Chancery Division, Mr. Justice Romer, on October 30, concluded an action which had been in hearing for three days. It was brought by Mr. Couper, who carries on his business as a baker at Denmark-hill, against Mrs. Turner, who is a purveyor of fried fish in the same locality, and the object of the action was to secure an injunction to restrain the defendant from conducting her business so as to cause a nuisance. In August, 1896, an injunction was obtained until the trial of the action, which now came on, as there had been no abatement of the nuisance, according to the allegation of the plaintiff. He further alleged that he and his family had suffered in health from the nuisance caused by the defendant's shop, and Dr. William B. Taylor, a local practitioner, who was called as a witness, testified to having attended the plaintiff and his wife for gastritis, which might have been brought on by the smells from defendant's shop. The defendant set up that her business was well conducted, and that the fish she sold was quite fresh.—Mr. Justice Romer made the injunction perpetual, with costs, but suspended its operation for ten weeks. He did not say that a fried fish shop was of necessity a nuisance, but he found that in this case the business had been carried on so as to be a nuisance to the plaintiff.

WATER AT SPIRIT PRICE.

AT Newark, on October 27, Thomas Richmond was summoned for selling whiskey not of the substance, nature, and quality demanded by the purchaser, namely, containing 8·6 of added water.—Defendant: Guilty of supplying the stuff, but innocent of knowing that it contained water.—Inspector Garforth said, on September 20 he drove to the defendant's inn at Muskham, and sent the driver to the door to call for two fourpennyworths of whiskey. Defendant brought the whiskey to the door in two glasses, and was paid by the driver. Witness then informed him that he was an inspector under the Food and Drugs Act, and had purchased it to have it analysed by the public analyst. He returned with Richmond into the inn, and divided the whiskey into three parts, one of which he sent to the public analyst, whose certificate stated that it contained 8·6 parts of added water more than the 25 under proof allowed.—John Brown, driver, said he went to the door of the inn and ordered the whiskey. There were two fourpennyworths. He handed the whiskey to Mr. Garforth and saw it sealed up.—Defendant said he had been in the public-house business 17 years and had never before been summoned. He went to Messrs. McGeorge's to fetch the whiskey and it was after office hours; but they let him have it out of the vaults, and he did not know it

was prepared for sale. His missis—his better-half—prepared it again, but was innocent of doing anything wrong knowingly. He had never had any complaint against him during the whole of these 17 years. He was sorry and it should not occur again. There were cards in the house as to the strength of the whiskey.—Mr. Thorpe said defendant had better take warning by this case, as he was liable to a penalty of £20.—Defendant: I am innocent of the matter.—Mr. Thorpe: We can't look over it altogether, and you will be fined in the mitigated penalty of 20s. including costs.

AT Llandilo Petty Sessions, David Davies, Plough Inn, Fellingwm, was summoned for selling adulterated spirits.—P.C. Jones said that on September 20 he visited the defendant's house, and purchased a shilling's-worth of brandy, part of which he sent up for analysis in the usual way.—The analyst reported it to be two degrees below the required strength.—Defendant was fined 25s. including costs.—Henry Harries, Penybont, Fellingwm, pleaded guilty to a similar offence, and was fined a similar amount.

AT Chelmsford Petty Sessions, William Spooner, landlord of the Blue Lion Inn, Great Baddow, was summoned for selling whiskey diluted to 34 degrees under proof, on September 7.—Mr. W. J. Gray appeared on behalf of the Chelmsford and District Licensed Victuallers' Association to defend.—Mr. Raglan Somerset, inspector under the Sale of Food and Drugs Act, stated that he bought a pint of whiskey of Miss Beatrice Spooner, and paid 2s. 8d. for it. When analysed it was found to be nine degrees below the minimum allowed.—Cross-examined: Before he bought the whiskey he saw a notice stating that "All spirits sold here are diluted."—Mr. Somerset explained that everyone knew spirits were not sold raw, but the notice did not state that the spirits were below what the law allowed.—Mr. Gray submitted that there had been no sale to the prejudice of the purchaser, as the fact that the spirits had been diluted was brought to his knowledge. The mere notice was not a protection unless it could be shown that it came to the notice of the purchaser, which it did in this case.—The Bench did not consider the notice sufficient and imposed a fine of £1 and 7s. 6d. costs.—Mr. Gray asked that a case might be stated, as the question was of great importance to the trade.

JASPER LEVY, landlord of the White Horse Inn, Great Baddow, was summoned for selling whiskey 29 degrees under proof on September 7.—Mr. Raglan Somerset bought half a pint of Scotch whiskey for 1s. 4d. Defendant asked witness if he had seen a notice stating that all the spirits sold in the bar were diluted?—Witness replied "No," and it was brought to him. The notice was not placed in such a position that it could be easily seen. The analysis showed that the spirit was 4 degrees below the minimum allowed.—Mr. Gray pointed out that the dilution below the standard allowed was very small. He thought the payment of the costs would be sufficient.—The Bench fined the defendant 5s. and 7s. 6d. costs; in default seven days' imprisonment.

GEORGE FINCH, landlord of the Cricketers' Inn, Danbury, was summoned for selling spirits 10 degrees below the minimum allowed by Act of Parliament.—He was fined £1, with 6s. costs.

ALFRED JACKSON, of the King's Head Inn, Great Baddow, was summoned for selling whiskey 28 degrees under proof.—Mr. Somerset stated that he bought a pint of Scotch whiskey for 2s. 8d. It was analysed and found to be three degrees under the strength allowed. This was lower than any of the previous cases.—The defendant said he exhibited a notice that all spirits sold at that establishment were diluted, and no strength was guaranteed. When he got the whiskey in, last May, he reduced it 25 per cent. If it was more than

that it was due to evaporation.—Mr. Somerset and Inspector Dale stated that there was no notice up in the house.—The Bench imposed a fine of 5s., with 9s. costs, in default seven days' imprisonment.

At the Barnard Castle Police-court, on October 27, Mr. M. A. Thompson, County Council Inspector, proceeded against Geo. Wall, innkeeper, Egglestone, on two charges of selling adulterated whiskey and rum.—Defendant pleaded guilty.—Mr. Thompson said that on September 9 he called at defendant's house and secured a pint of whiskey and a pint of rum from defendant's daughter, and on making an analysis of the liquids afterwards found the whiskey to be 9·15 below the standard required, and the rum 16·3.—The Chairman: That is very strong.—Defendant said he did not know but what the liquors were all right. He had no tester, and had mixed them according to the instructions of the traveller.—A fine of £5, including costs, was inflicted in each case.

At Flaxton, Mary Cook, innkeeper, Flaxton, was summoned for selling whiskey which was not of the quality demanded.—Thomas Newstead, inspector, said that on September 7 he purchased a pint of whiskey at the defendant's house, paying 2s. 4d. He afterwards told her he had bought it for analysis, and then divided it in the usual way, one part for the Public Analyst, one for himself, and one for the defendant. The analyst's report showed that the whiskey contained 15 per cent. of added water, in addition to the 25 per cent. allowed by law. The defendant then told him that if it was so she supposed she would have to pay. She had no spirit-tester.—Mr. K. E. T. Wilkinson, who represented the defendant, did not contest the evidence, but asked for a light penalty, because of the defendant's good character. He said that she had recently had to attend both to the housework and to the customers, and the cork must have been left out of the bottle from which she served the inspector. She had held a licence for 24 years, and there had never been a complaint against her.—The magistrates took into consideration the defendant's good character, and fined her only 2s. 6d. and the costs.

ADULTERATION ACTS IN BELFAST.

THE quarterly report of Dr. J. F. Hodges, the Public Analyst for the City of Belfast, states: "Since my last quarterly report I have submitted to examination 74 samples of food, &c. These included—43 samples of sweet milk, 7 buttermilk, 5 whiskey, 1 coffee, 3 cheese, 6 butter, 4 pepper, 3 mustard, and 3 cream of tartar. Seven articles were found adulterated, viz.: 3 samples of sweet milk, 2 of buttermilk, and 2 of butter. Prosecutions were instituted in three cases, and fines amounting to £7 5s. inflicted.

DRUGS.

At North London Police-court, on October 30, Mr. Robert Sharpe, a chemist, of Well-street, Hackney, was summoned by the Hackney Vestry for selling sweet spirits of nitre which was 60 per cent. deficient in its active principal. Mr. H. T. Tiddeman appeared to prosecute, but the defendant pleaded guilty, and offered the explanation that the spirit must have evaporated because of having been delivered in a corked instead of a stoppered bottle. He bought as ordered by the British Pharmacopæia, and sold it as such. He did not allege that it was not of the standard strength when he purchased it, but could only account for the deficiency by evaporation. The bulk of the drug was in a quart bottle and was delivered to an assistant in his absence, and this assistant neglected to at once pour the contents of this bottle into a properly stoppered stock bottle. Mr. Tiddeman told the magistrate that he had no reason to doubt the defendant's explanation. Mr. Bros dismissed the summons on the defendant paying 12s. 6d. costs.

COFFEE.

MR. FARLEY, grocer, Earlestown, and his manager, Henry Banks, were charged at Newton, on October 30, with selling a mixture of coffee and chicory as pure coffee. Banks was also charged with interfering with the police in the execution of their duty by sweeping the samples of coffee off the counter when told they were for analytical purposes, and refusing to supply more. Farley was fined £3 and costs and Banks 20s. and costs. Notice of appeal on a technical point was given.

ANOTHER LOW FLASH OIL VICTIM.

MR. WYNNE BAXTER, coroner, held an inquiry at the London Hospital, on November 2, respecting the death of Sarah Berlovitch, 15, the daughter of a cigarette maker, of 2, Montague House, Old Montague-street, Whitechapel.

Morris Berlovitch, the father, stated he had been told that about half-past twelve on Wednesday last the deceased turned down the wick of a paraffin lamp, which had been alight for about 16 hours. An explosion immediately occurred, and the burning oil set fire to the girl's clothing. After the flames were extinguished she was taken to the hospital, where she died on Friday.

The Coroner: Where did you buy the oil?

Witness: At an oil shop in Great Garden-street.

Mr. Butler (L.C.C. inspector): What oil did you use?

Witness: I don't know.

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ANALYTICAL REPORTS.

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"Professor of Hygiene and Director of the Laboratory, Bow and Bromley Institute, London;
"Official Analyst to the International Bakers', Confectioners', and Grocers' Exhibitions, London; Author of 'Food, Diet, and Digestion,' etc."

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Mr. Butler: What did you pay for it?

Witness: Twopence halfpenny for half a gallon.

The coroner said unfortunately they had not been able to obtain a sample of the oil, or doubtless Mr. Butler would have been able to tell them that it flashed at a very low point. The fact that the lamp had been alight for 16 hours, as had been stated, would cause the glass to get hot, and the oil that remained would therefore also be heated. This would cause a vapour of a highly inflammable nature to collect in the reservoir, and when the wick was turned down an explosion naturally occurred. He (the Coroner), however, supposed that this would occur no matter what oil was used.

Mr. Butler: Not with an oil of 100 degrees.

A Juror: I say it is quite time that the County Council had power not only to regulate the sale of lamps, but also oil.

Mr. Butler: These cheap oils flash from 74 degrees to 80 degrees, and are the cause of great mischief.

The jury returned a verdict of accidental death, and added:—"We are of opinion that the sale of dangerous paraffin lamps and low-flash oils ought to be prohibited by statute."

THE CHAMBERS OF AGRICULTURE AND ADULTERATION.

A COUNCIL meeting of the Central and Associated Chambers of Agriculture was held in the hall of the Society of Arts on November 2, Mr. Warton, M.P., in the chair.

The Dairy Products Committee presented a report in which they set forth that a Bill "To amend the Acts relating to the sale of food and drugs," and entitled, "The Sale of Food and Drugs Bill," was introduced in the House of Commons for August 2 last, and withdrawn on August 5. The Committee regretted that the promise given by Government to introduce a Bill on the subject last Session was not more effectively redeemed. They recognised, however, that the introduction of the Bill was intended to be an earnest of the Government's intentions for next Session, and they ventured to hope that the new Bill would fully embody the recommendations of the Select Committee on Food Products. (Hear, hear.) The Bill as introduced only partially embodied the recommendations of the Select Committee, and was, in the opinion of the Committee, utterly inadequate. In the interests of both producers and consumers, the Committee strongly urged that effect should at least be given in the forthcoming Bill to the following recommendations of the Select Committee: "The establishment of a court of reference; the examination of dairy products at the ports, with the view of stopping the importation of adulterated produce; the prohibition of the artificial colouring of margarine to resemble or imitate butter; and the prohibition of the mixture of margarine and butter for sale." (Hear, hear.) These recommendations were omitted from the Bill introduced by the Government, as were also the majority of the 19 remaining recommendations of the Select Committee. The Committee were unable to find any justification for the disregard shown for the recommendations arrived at by the Select Committee, and urged that every effort should be made to convince the Government of the entire unanimity which existed among agriculturalists that legislative effect should be given to these recommendations. (Applause.)

On the motion of Mr. Carrington Smith, seconded by Mr. Middleton, the report was adopted.

It was also resolved that copies of the report be forwarded to the Prime Minister, the President of the Local Government Board, and the President of the Board of Agriculture.

MILK.

At Harlesden District Police-court, George Dowse, trading as E. Handsley and Co., Callow Park Dairy, was summoned, at the instance of Mr. Watts, for selling as pure milk a liquid found to contain six parts of added water.—Mr. Stephen, who defended, pleaded a warranty from Brooks, the farmer, of Leicester, who supplied the milk.—Mr. Watts took an exception to the warranty, which was wrongly dated, and reminded the Bench that on a previous occasion they had ignored an analyst's report on the plea of a "clerical" error, but the Court now overruled the objection.—In the result the Bench dismissed the case, but on the application of Mr. Watts the costs of the analyst's fee and court costs were granted.—Mr. Watts intimated his intention of proceeding against the farmer Brooks.

BURTON MILK DEALER.

ROBERT E. THOMPSON, milk dealer, of Horninglow-road, was charged on an adjourned summons, at Burton, on October 29, with having sold a quantity of milk from which 18 per cent. of fat had been abstracted, and a further indictment charged him with selling milk containing 10 per cent. of added water.—Mr. R. A. Willcock (Messrs. Willcock and Taylor, Wolverhampton) appeared to prosecute, and Mr. T. B. Sproston (Newcastle-under-Lyme) defended. It will be remembered that the case was adjourned in order that the sample of milk alleged to have been left with the defendant by the assistant-inspector (Mr. Toy) might be sent to Somerset House for analysis.—The Somerset House authorities fully confirmed the report of the Public Analyst.—At the first hearing Mr. Jones, the county analyst, admitted that the sample submitted to Mr. Lott was not a sample of the milk submitted to him (Mr. Jones).—Mr. Sproston, on behalf of the defendant, submitted that as the assistant-inspector had no fewer than forty bottles of milk in his cart at the time he took Mr. Thompson's sample, there might have been a mistake.—Robert E. Thompson, defendant, spoke to entering into a contract with Mr. A. J. Reeve for the supply of seventeen imperial gallons of new milk, and that on the morning of the day named he met Mr. Reeves' man, took the milk from him, and proceeded to go his round, without taking it home. He neither abstracted cream nor added water, and the milk was warm when the assistant bought a quantity of it. The assistant divided the milk into three bottles, sealed one up, and gave it to witness, saying, "That will do, you can go now." Witness took the sample and left. He did not see any other sealing done. The other two samples were not sealed in his presence. Witness kept the sample 26 days before a summons was issued, and the next day he handed it to Mr. Lott for analysis. He had never touched it or tampered with it in any way from the time it was given to him to the time he handed it to Mr. Lott.—Cross-examined: All the assistant-inspector did was to pour the milk into three bottles, seal one up, and then tell witness that would do and he could go. He had had experience of the taking of samples before. In December, 1893, he was fined £3 and costs for adulteration, and in June, 1896, he was fined £3 and costs for refusing to sell to Mr. Toy. He never sold creamed milk unless it was ordered. On the day named he had one churn and two little cans.—Re-examined: All the milk he had in his cart that morning had come from Mr. Reeves the same morning. Messrs. Toy, sen. and jun., were both present when the sample was taken, and then the father went to another milk float.—Mr. F. E. Lott, F.I.C., said he received a sample of milk from Mr. Thompson on August 6, in a small bottle, which was sealed in the usual way of seal-

ing. The seal did not appear to have been tampered with, although a portion was broken at one edge. The sealing-wax was level with the glass, and he had to use some force with a knife to extract the cork. He examined the milk, and the result of his analysis was to find 3·6 parts of fat, 8·68 solids not fat, which he considered pure milk.—Cross-examined: He did not form any opinion as to whether there was any formalin present, as he did not analyse it for that purpose. It would not be a difficult matter to put another label on the bottle, and he knew of one instance in which a cork was in such a condition that he could have abstracted and replaced it without apparent injury to the seal.—Mr. A. J. Reeve deposed to sending the seventeen gallons of new milk to the defendant. It was possible for deterioration to take place by adding new milk to skim.—After a short consultation, the Mayor and the Bench were unanimously of opinion that the county authorities had proved their case, and fined defendant £4 and costs in each case.

WARWICKSHIRE AND ADULTERATION.

DR. BOSTOCK HILL reports: "The samples I have received consisted of the following articles: Butter 24, coffee 8, lard 5, mustard 5, pepper 9, whiskey 13, vinegar 2, gin 1. One sample of butter contained 85 per cent. of foreign fat, but the others were all genuine. A sample of coffee, sold as French coffee and labelled as a mixture, contained 90 per cent. of chicory, and there can be no doubt that the sale of these coffee compounds, even when labelled, is a fraud, as the price charged for them is always higher than their commercial value, whilst the purchaser has no means of knowing how infinitesimal is the quantity of coffee contained. It seems to me quite likely that the sale of such mixtures may have had something to do with the decreased sale of coffee, which has been noticed of late years. One of the samples of cocoa submitted contained 60 per cent. of sugar and about 15 per cent. of starch, and, although labelled as a mixture in accordance with the Act, is a very objectionable article. In future legislation, I am of opinion that it would be very desirable for all such mixtures to be labelled, and that the label should indicate the proportions of the foreign ingredients. In this way the public would know whether they were getting an article they wanted or not. All the other samples submitted were of good quality, so that the percentage of adulteration on the articles purchased is only 3·2 per cent., which is considerably below the average." The Council decided to request the Local Government Board to promote legislation enforcing the suggested regulation.

CORRESPONDENCE.

THE POWERS OF SANITARY INSPECTORS.

To the Editor of FOOD AND SANITATION.

SIR,—I am pleased to say that considerable interest has been manifested in the case of *Clarke v. London*, reported in *The Times* of the 17th ult., in which Mr. Commissioner Kerr ruled that the builder was bound to carry out the verbal orders of a sanitary inspector without reference to the owner, who in his turn was liable for the cost of the work he had not ordered. The case had naturally been commented upon by our leading medical and architectural journals, and the response to the invitation in my letter published on the 25th ult. has been such that legal advice has been obtained, with results which will shortly be laid before a meeting of those interested. I shall be pleased to forward an invitation to attend the meeting to all who

are willing to join in a protest against such an arbitrary administration of the Public Health Acts.

We know that too much attention cannot be given to sanitation—in other words, to cleanliness—but the law of health as administered by a local sanitary authority, even with the assistance of a department of the imperial Government, are not always interpreted with that correctness that is necessary to ensure sanitary conditions, and there is a growing opinion that it is possible a careful inquiry into facts connected with the administration of the Public Health Acts may lead to the conclusion that the powers of our local sanitary authorities are greater than is desirable in the interest of the health of the community, even when legitimately exercised. However opinion may differ as to this, it surely must be admitted by all those who give the matter the least consideration, that if we tolerate the transfer of these powers to a salaried inspector, the privacy of an Englishman's home will soon become a thing of the past. Those who are prepared to accept such a state of things will perhaps not feel it to be any injustice to be made liable for any orders the sanitary inspector may presume to give.

I am persuaded that whatever may be the legal powers of sanitary inspectors, experience has already shown that in some respects the Public Health Acts need amendment, and proposals to that end will be submitted to the coming meeting to consider Mr. Commissioner Kerr's strange ruling in the case of *Clarke v. London*.—I am, etc.,

MARK H. JUDGE, A.R.I.B.A.,
(Fellow of the Sanitary Institute).

No. 7, Pall-mall, S.W., October 30.

FOOD AND DRUG ACT INSPECTION IN AMERICA.

THE operations of Massachusetts State Board of Health under the provisions of the Food and Drugs Acts for the year ending September 30, 1896, are detailed in the following report.

The whole number of samples of food and drugs (including milk) examined during the year was 8,357, or 1,048 more than the number examined in the year ending September 30, 1895, and 2,453 more than the average annual number examined in the ten years from September 30, 1885, to September 30, 1895.

The whole number examined since the beginning of operations in this department in 1883 was 76,113.

The following summary embraces the work done during the year:—

| | |
|---|-------|
| Number of samples of milk examined ... | 4,484 |
| " " above standard ... | 2,904 |
| " " below " ... | 1,580 |
| Percentage of adulteration or deficiency ... | 35·2 |
| Number of samples of other kinds of food (not milk) ... | 3,368 |
| Number of samples above standard ... | 2,978 |
| " " below " ... | 390 |
| Percentage of adulteration ... | 11·6 |
| Number of samples of drugs examined ... | 505 |
| " " of good quality ... | 251 |
| " " adulterated, as defined by the statutes ... | 254 |
| Percentage of adulteration ... | 50·3 |
| Total number of samples of food and drugs examined ... | 8,357 |
| Total number found to be of good quality ... | 6,133 |
| " not conforming to the statutes ... | 2,224 |
| Percentage of adulteration ... | 26·6 |

Attention has already been called, in previous reports, to the fact that the percentages given in the foregoing summary do not represent, in any degree, the actual ratio of adulteration existing in food products and in

drugs, for several reasons: chiefly on account of the fact that the experience of the Board enables it, first, to exercise a careful selection of such articles, mainly, as are liable to adulteration; secondly, to obtain such articles in those seasons of the year when their adulteration is most common; and third, to pay special attention to new forms of adulteration which are constantly appearing as fast as the fraud and ingenuity of the professional adulterator present them to the public.

Legislation also has a marked effect upon the figures which represent the conditions of the food supply as found upon analysis. For example, a standard of milk was established by a statute of 1880, requiring that milk should be deemed to be not of good standard quality if not possessing 13 per cent. of total solids; but this law was amended in 1886 by a provision that the standard of quality during two months in the year (May and June) might be 12 per cent. of solids. In 1896 the law was further amended by providing that the number of months in which the standard should be 12 per cent. should be increased to five (April, May, June, July, and August). Now, since the number of samples of milk ranging from 12 to 13 per cent. of solids invariably constitutes a large percentage of the whole number collected, the percentage of samples found to be below the legal standard would necessarily be materially diminished by such legislation, while the actual quality, as determined by analysis, might not be changed. This statement is corroborated by that of the principal analyst, to be found on a later page. During the years 1893, 1894, and 1895 the usual collections of milk submitted to examination showed a ratio of about 49 per cent. below the legal standard, while those of the past year, under the amended statute, gave only 35.2 per cent. below the standard.

It appears that 76,113 samples of food and drugs have been collected by the inspectors of the Board and submitted to the analysts for examination during the fourteen years in which the statutes providing for this work have been in operation. The total cost of the work has been 127,448 dols. 24 cents. Enough has already been said in previous reports to show that many times this sum have undoubtedly been saved to the consumers throughout the State.

The cost of collection and analysis per sample has also been reduced nearly one-half. This expense in 1883 amounted to dols. 2.26 per sample, but this amount has been reduced to dols. 1.23 in 1896, a sum much less than that of any preceding year. Part of this saving is due to the concentration of the greater part of the work of analysis under one head at the State House Laboratory.

By a requirement of the Statute the greater part of the appropriation for the work of this department is expended in the inspection of milk and milk products and the enforcement of the laws relating to these valuable articles of food. Hence the greater portion of the samples collected are of this character.

In the last annual report the results of a single street collection of milk taken from milk waggons in one city were published, the average solids of 20 samples being 12.98.

Attention is called to the statement of the analyst relative to the change of standard and its effect upon the ratio of apparent adulteration, and the method of detection of formalin. A further table of analyses of condensed milk is also presented, in addition to those which were published last year. Analyses of eight samples of evaporated cream, of six different brands, are also presented, in which it is shown, as well as in the case of some of the brands of condensed milk, that the cream has been largely removed, thus depriving them of an important ingredient of high value as a nutrient.

The principal articles of food found to be adulterated during the year were olive oil, lard, honey, molasses,

maple syrup and sugar, spices, especially cayenne, vinegar, coffee, cocoa and cream of tartar.

DRUGS.—The principal drugs found adulterated or below the standard were ether, alcohol, ammonia water and chlorine water, distilled water (in this article the solids varied from 0 to 73 per 100,000 parts), calx chlorata, extracts of liquorice and nux vomica, powdered opium, compound spirits of ether, spirits of nitrous ether, whiskey, tincture of iodine, syrup, tincture of opium, mercurial ointment, white and red wine.

SUMMARY.—The whole number of complaints entered by the State Board of Health during the year ending Sept. 30, 1896, in the courts of the Commonwealth, against parties for violation of the statutes relating to food and drugs inspection, was 75.

In 74, or 98.7 per cent., of these the parties were convicted. One was discharged in the municipal court.

Of the whole number, 68 were for violation of the laws relating to milk adulteration, and of this number 67 resulted in convictions. The greater number of these was for violation of the statute providing that milk offered for sale shall be of good standard quality.

In 10 of the foregoing cases the complaints were for sales of milk containing colouring matter:

The attention of the Legislature is again respectfully called to the provisions of chapter 425 of the Acts of 1894, which debar any private citizen from maintaining an action against a producer for selling adulterated milk.

Attention is also respectfully called to the provisions of section 23 of chapter 397 of the Acts of 1896, by which the people are now deprived of any legal protection against the harmful action of poisonous patent medicines.

All of the seven parties against whom complaints were entered for fraudulent sales of other kinds of food were convicted.

The articles of food with reference to which these complaints were made were as follows:—

Maple sugar, four cases; maple syrup, one case; molasses, one case; cream of tartar, one case.

The following Statute, as amended in 1896 (chapter 398), presents the standard of milk in Massachusetts at the date of publishing this report:—

[Chapter 398, Section 2, Acts of 1896.]

In all prosecutions under this chapter, if the milk is shown upon analysis to contain less than thirteen per cent. of milk solids, or to contain less than nine and three-tenths per cent. of milk solids, exclusive of fat, or to contain less than three and seven-tenths per cent. of fat, it shall be deemed, for the purposes of this Act, to be not of good standard quality, except during the months of April, May, June, July and August, when milk containing less than twelve per cent. of milk solids, or less than nine per cent. of milk solids exclusive of fat, or less than three per cent. of fat, shall be deemed to be not of good standard quality.

PROPRIETARY MEDICINES.—During the course of its work in the inspection of food and drugs, a considerable number of specimens of proprietary medicines has been examined by the analysts of the Board, and the results of analysis have been published in the annual reports. These published statements are scattered through different reports covering several years, and some of them are out of print. There is an increasing demand for the information contained in them, and it has been thought advisable to republish the results in a condensed form, in answer to this demand, with such additions as have been made during the past year.

The following list contains a condensed statement of the results of analysis of most of the proprietary articles alluded to above. In very many instances the preparations were examined for the presence of some single ingredient only, where this ingredient was found to be

a poisonous substance, injurious to the health of persons using it.

COSMETICS.—The following contain acetate of lead (sugar of lead) or some active lead compound:—

| | Per cent. of lead contained. |
|--|------------------------------------|
| Ayer's Hair Vigor, contained the equivalent of about | 0.30 |
| "Renown" Hair Restorer, contained the equivalent of about | 1.86 |
| Mrs. Allen's Hair Restorer, contained the equivalent of about | 2.30 |
| American Hair Restorer, contained the equivalent of about | 0.61 |
| Barrett's Vegetable Hair Restorative, contained the equivalent of about | 0.22 |
| Chevalier's Life for the Hair, contained | Much |
| Hall's Vegetable Sicilian Hair Renewer, contained the equivalent of about | 1.75 |
| Wood's Hair Restorative, contained the equivalent of about | 1.59 |
| Ring's Vegetable Ambrosia, contained the equivalent of about | 1.51 |
| Parker's Hair Balsam, contained the equivalent of about | 2.32 |
| Wolf's Vegetable Hair Restorer, contained the equivalent of about | 0.95 |

Instances of lead poisoning have been known to occur from the free external use of such preparations as the foregoing.

The following contained corrosive sublimate, or some other poisonous salt of mercury, in the proportion of 1 to 15 grains per ounce:—

Harriot Hubbard Ayer's Recamier Cream, Balm, and Lotion.
Madame Ruppert's World renowned Face Bleach.
Madame Yale's Excelsior Complexion Bleach.
Hill's Freckle Lotion.
Soule's Freckle and Moth Eradicator.
Perry's Freckle Lotion.
Oriental Cream.
Mrs. McCarrison's Famous Diamond Face Lotion (14.7 grains to the ounce).
Royal Cream.

In one instance a six-ounce bottle contained 47 grains of corrosive sublimate. Another contained 14 grains of the bichloride per ounce. It is not surprising that instances of serious harm were reported from the use of such articles.

Tonics and Bitters.—The following were examined for the purpose of ascertaining the percentage of alcohol in each. Some of them have been recommended as temperance drinks:—

| | Per cent. of alcohol (by volume). |
|---|---|
| "Best" Tonic | 7.6 |
| Carter's Physical Extract | 22.0 |
| Hooker's Wigwam Tonic | 20.7 |
| Hoofland's German Tonic | 29.3 |
| Hop Tonic | 7.0 |
| Howe's Arabian Tonic, "not a rum drink" | 13.2 |
| Jackson's Golden Seal Tonic | 19.6 |
| Liebig Company's Coca Beef Tonic | 23.2 |
| Mensman's Peptonized Beef Tonic | 16.5 |
| Parker's Tonic, "purely vegetable," "recommended for inebriates" | 41.6 |
| Schenck's Sea Weed Tonic, "entirely harmless" | 19.5 |
| Atwood's Quinine Tonic Bitters | 29.2 |
| L. T. Atwood's Jaundice Bitters | 22.3 |
| Moses Atwood's Jaundice Bitters | 17.1 |
| Baxter's Mandrake Bitters | 16.5 |
| Boker's Stomach Bitters | 42.6 |
| Brown's Iron Bitters | 19.7 |
| Burdock Blood Bitters | 25.2 |

| | Per cent. of Alcohol (by volume). |
|--|---|
| Carter's Scotch Bitters | 17.6 |
| Colton's Bitters | 27.1 |
| Copp's White Mountain Bitters, "not an alcoholic beverage" | 6.0 |
| Drake's Plantation Bitters | 33.2 |
| Flint's Quaker Bitters | 21.4 |
| Goodhue's Bitters | 16.1 |
| Greene's Nervura | 17.2 |
| Hartshorn's Bitters | 22.2 |
| Hoofland's German Bitters, "entirely vegetable and free from alcoholic stimulant" | 25.6 |
| Hop Bitters | 12.0 |
| Hostetter's Stomach Bitters | 44.3 |
| Kaufmann's Sulphur Bitters, "contains no alcohol." (As a matter of fact, it contains 20.5 per cent of alcohol and no sulphur) | 20.5 |
| Kingsley's Iron Tonic | 14.9 |
| Langley's Bitters | 18.1 |
| Liverpool's Mexican Tonic Bitters | 22.4 |
| Paine's Celery Compound | 21.0 |
| Pierce's Indian Restorative Bitters | 6.1 |
| Puritana | 22.0 |
| Z. Porter's Stomach Bitters | 27.9 |
| Pulmonine | 16.0 |
| Rush's Bitters | 35.0 |
| Richardson's Concentrated Sherry Wine Bitters | 47.5 |
| Secor's Chinchona Bitters | 13.1 |
| Shonyo's German Bitters | 21.5 |
| Job Sweet's Strengthening Bitters | 29.0 |
| Thurston's Old Continental Bitters | 11.4 |
| Walker's Vinegar Bitters, "contains no spirit" | 6.1 |
| Warner's Safe Tonic Bitters | 35.7 |
| Warren's Bilious Bitters | 21.5 |
| Wheeler's Tonic Sherry Wine Bitters | 18.8 |
| Wheat Bitters | 13.6 |
| Faith Whitcomb's Nerve Bitters | 20.3 |
| Dr. Williams's Vegetable Jaundice Bitters | 18.5 |
| Whiskol, "a non-intoxicating stimulant, whiskey without its sting" | 28.2 |
| Colden's Liquid Beef Tonic, "recommended for treatment of alcohol habit" | 26.5 |
| Ayer's Sarsaparilla | 26.2 |
| Thayer's Compound Extract of Sarsaparilla | 21.5 |
| Hood's Sarsaparilla | 18.8 |
| Allen's Sarsaparilla | 13.5 |
| Dana's Sarsaparilla | 13.5 |
| Brown's Sarsaparilla | 13.5 |
| Corbett's Shaker Sarsaparilla | 8.8 |
| Radway's Resolvent | 7.9 |

The dose recommended upon the labels of the foregoing preparations varied from a teaspoonful to a wine-glassful, and the frequency also varied from one to four times a day, "increased as needed."

"Opium Cures."—Each of the so-called cures furnished by the following persons, mostly in Ohio, Indiana and Illinois, were found to contain morphine in variable amounts:—

| | |
|------------------|------------------|
| H. L. Baker | J. C. Hoffman |
| J. C. Beck | H. H. Kane |
| C. C. Beers | F. E. Marsh |
| G. A. Bradford | L. Meeker. |
| P. B. Bowzer | Wm. P. Phelon |
| J. S. Carleton | Salvo Remedy Co. |
| S. B. Collins | W. B. Squire |
| B. S. Dispensary | J. L. Stevens |
| J. A. Drollinger | B. M. Woolley |
| J. R. A. Dunn | |

Dr. Buckland's Scotch Oats Essence.

The so-called Keeley's Double Chloride of Gold Cure, at first advertised as a remedy for the opium habit, was also examined by the Board in 1884, and found to contain not a trace of gold.

(To be continued.)

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What it is not!

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Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

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Food and Sanitation.

SATURDAY, NOVEMBER 13TH, 1897.

THE MAKERS OF THE COFFIN FOR THE AMERICAN OIL GANG.

IT has for long been our custom to pioneer and to find after years of strenuous fighting in a cause that others not only steal our thunder, but our garments. However, since it is aiding the good cause that others should be permitted to strut in their borrowed plumes, we do not care to complain much. The large number of strong admirers and ardent haters of ourselves who read FOOD AND SANITATION would think from the following that the Editor of FOOD AND SANITATION was

lecturing, instead of which it was Mr. E. Price Edwards, one of the principals of Trinity House—the official authority which controls all the lighthouses and lightships round the English coast.

Lecturing at Sutton, on November 9, on "Mineral Oils," Mr. Edwards gave *The Star* the credit of realising the importance of the subject of the low flash-point. In their crusade, he said, they had been doing what a great many people considered good service.

Pointing out the danger of the first installations from the crude petroleum which were sent across to this country, he criticised the action of Parliament in permitting the "safe" point to begin where the restrictions on naphtha, classed as a dangerous commodity, were taken off. With the oil which was sold in this country as of 73 deg. flash-point, vapour collected in the space above the oil container of the lamp, air became mixed with it, and if a flame got to it an explosion followed. A flash point of 73 deg. was not safe. It was a very ordinary summer heat—the temperature in many rooms was often higher—and lamps under such circumstances were nothing better than infernal machines. The total quantity of American oil imported into this country in 1896 was over 73,000,000 gallons, and nearly all of it had a flashing point of from 73 deg. to 76 deg. The Americans did not use this oil themselves; they were too wide awake. Yet this country could get safe oil if the public insisted upon having it. In the English lighthouses they used mineral oils which flashed at 154 deg., and American oil which flashed at as high a point as 250 deg. Then it was absolutely safe, and could do no harm to anybody, and though raising the flash point might slightly increase the cost, the increase would hardly be felt by the public.

The cry of "unsafe lamps" was only a "red herring." Oil which had a high flash-point could be used safely in a defective lamp, but low-flash oil was never safe in the most perfect lamp. If a demand were generally made to have the flash point raised to, say, 100 deg., and if members of Parliament were asked to make that a point in their legislative programme, he felt convinced that the number of accidents from oil explosions would be materially reduced.

For the help of *The Star* in enlightening the public on this question, all humanitarians feel thankful, but everything Mr. Edwards says in the above is what we have said over and over again for years past. We can only assume that Mr. Edwards is a very recent convert to the cause of truth, or he would have credited this journal and the *Chemical Trade Journal* with making the coffin for the gang whose villainies, dynamite explosions, and corruptions we have exposed for years past, and whose work as procurers of scientific prostitutes the *Chemical Trade Journal* so ably revealed. The makers of the coffin for the American oil gang are D. R. Stuart, Cecil Henry New, Michael Henry, and Henry Demarest Lloyd, and we put this on record not from any feeling of personal vanity, but because we think it is only

just to Mr. Steuart, Mr. New, and Mr. Lloyd that the work they have done for years past at much personal loss of money and time should not, now that truth is about to prevail, be ignored. Those who drive the nails into the coffin are entitled to honour and respect, but the pioneers who take a cause and labour for it through good and ill repute are too often forgotten, and all their hard work and fighting goes to put wreaths on the brow of some Parliamentary bounder on the make who may bring in a measure to remedy the abuse.

For ourselves, we do not care so long as the cause succeeds. We aroused from its torpor the Food and Drugs Act, and kicked and cuffed local authorities and Boards until 43,962 samples were taken last year, as against 29,000 when we began our crusade. We notice a host of "bounders on the make" now claim the credit of this, but it pleases them and amuses us, and our readers know the truth. In that crusade, however, we began it and fought it alone, and as we never cared one brass farthing for the bullying of a judge, the smile of an asinine M.P., or the fee-hunting hunger of an analyst, we cared not who filched or wore laurels so long as the good work went on all right. In the case of the protection of the public from being roasted alive at the rate of a person per day, and of property being destroyed to benefit the meanest gang of hypocrites and scoundrels unhung, millionaires though they be, there are differences. We have never met Mr. Steuart, Mr. New, or Mr. Lloyd, nor have we met or had any communications with anyone connected with either Scotch, American, Russian, or other petroleum interests, but the work of the gentlemen named has seemed to us able, independent, fearless, and honest, and our pages show our appreciation of it. Whatever we may think of our own share in the work, it would be unfair and dishonest to conceal from our readers how worthily and thoroughly the men we have named have worked for the public welfare, and of the credit for this good work they deserve their share.

LEICESTERSHIRE COUNTY COUNCIL AND THE FOOD AND DRUGS ACTS.

THE Chief Constable reports that during the quarter 85 samples have been submitted for analysis, viz., 28 gin, 28 coffee, 27 prescriptions, and two milk. Two samples of gin and one sample of coffee were certified to be adulterated; each of the vendors were proceeded against and convicted, the total fines and costs amount to £10 2s. 6d. No samples of feeding or fertilising materials had been collected since the last meeting of the committee.

Mr. T. H. Heward moved the adoption of the report. He mentioned that a decision had just been arrived at by the Birmingham magistrates to the effect that a milk dealer was liable for short measure in a churn which, owing to indentations, could not contain the quantity for which it was stamped. That was a new feature of the law, against which farmers must guard themselves.

Mr. Heward further moved, "That this Council desires to express its great regret that the Bill dealing with the adulteration of food, introduced during the last session of Parliament, did not deal with the subjects of

mixing margarine with butter, the colouring of margarine to imitate butter, the prevention of importation of adulterated butter, and the establishment of standards of purity in food, and earnestly hopes that special attention will be given to these and other important recommendations in the report of the Select Parliamentary Committee in any future Bill." He said it was the outcome of the county analyst's report, and was a proposition which would commend itself to every member of the Council, and especially those interested in agriculture. So far as they were concerned, he believed he was justified in saying the recommendations had the approval of the county analyst, the Chief Constable, and the Clerk of the Peace, who was responsible for the prosecutions under the Act, and that the magistrates administering the law in the county had found difficulties in administering it, as it now stood. If the recommendations contained in the report of the Royal Commission were adopted and put into an Act of Parliament, it would assist very materially the administration of the Food and Drugs Act. The resolution was one which had been passed by the National Agricultural Union.

Mr. de Lisle seconded the resolution, remarking that he wished to make an addition to it if Mr. Heward would allow him, or else to move a special resolution. He wanted to make a suggestion for any future Bill which might be prepared. They were paying to-day for dairy institutes and all sorts of lectures to teach people how to make good cheese and good butter; yet good butter made no more money than bad butter. ("No, no.") Consequently, he thought it was a waste of money teaching people how to make good butter—(laughter)—and his proposed addition was "that an inspector be appointed to inspect butter markets for the purpose of selling butter according to quality, and not all at one price per pound, good, bad, and indifferent, as is done at the present time."

The Chairman said he did not think this proceeding was in order, and ruled that the original resolution must first be submitted for approval.

Mr. Finney said he opposed the resolution in committee on this ground, that in fixing a standard for the purity of food, the question of a standard for milk arose. He happened to be a farmer, and he was quite convinced it would not be a good thing for the farming industry or for the public generally to fix any standard for milk because the milk from cows varied very materially. If a high standard was fixed, a farmer, who might have his cows in a sloppy pasture in certain times of the year, would be liable to be summoned and fined when he was perfectly innocent. On the other hand, if they fixed the standard very low, he thought the public would suffer because dealers would naturally at once reduce any milk that they had down to the recognised standard. Instead of doing anything of the kind it would be better if the same system could be adopted that was adopted by the Dairy Institute, by which all milk was bought on its quality, the best quality obtaining the highest prices, and the inferior kinds smaller prices.

Mr. Everard thought there was a good deal in Mr. Finney's remarks, and he did not think such a measure would press equally on all classes. It would not probably affect a man who kept a large number of cows, and mixed all the milk together, but in the case of a man who only kept one cow, and supplied a small number of customers from it, the milk might fall below the standard, and the man would suffer.

Canon Watson strongly objected to the resolution, remarking that if all councillors came there to express their hopes and regrets they might sit there all day. (Laughter.) On that ground he objected to the resolution, as a matter of form.

Mr. Sanders supported the resolution. The Leicestershire Chamber of Agriculture had passed resolutions many times embodying all the suggestions of Mr.

Heward, as to the advisability of legislation on the subject of food adulteration. The Government appointed a strong committee to deal with this question, but the Government Bill did not embody the recommendations of the committee. Legislation was needed to check the adulteration that at present took place, because the law as it was at present administered was not sufficient to prevent or to check it. He thought that the chances of a farmer selling pure milk being convicted if a standard were fixed were only small. The only risk of injustice was in the instance suggested by Mr. Everard, where a man kept only one cow, because sometimes a single cow would give an abnormal quantity of milk, which might be very poor or very rich. Injustice might possibly be done to a man in this way, but in the case of a farmer who kept a large number of cows, and mixed all their milk together, the whole would very rarely come to less than any standard which would be likely to be fixed. It was generally far higher than the present standard adopted by Somerset House.

Mr. B. Hurst: If there are such cows as Mr. Sanders mentions, ought they not to be dispensed with? (Laughter.) Such milk ought not to be dealt out to the public.

Major Jary: Can an Act be passed to make cows amenable to this? (Laughter.)

The resolution was carried by 22 to 18.

Mr. Heward moved that copies of the resolution be sent to the Local Government Board, and to the four county members of Parliament, and the same was duly carried.

The Chairman then ruled that Mr. de Lisle's amendment was out of order, on the grounds that Mr. de Lisle had seconded the original resolution, that, according to the standing orders, no officer could be appointed except through the Finance Committee, and that the proposed motion was not on the agenda paper.

THE ISLE OF WIGHT ANALYST ON PRESERVATIVES.

IN a report to the Isle of Wight County Council, Mr. Otto Hehner, the public analyst, stated, says the *Grocer*, that there had been several prosecutions in various parts of the country for the sale of articles of food containing boracic acid, but, considering that preservatives were not added to food with any fraudulent intention, he was of opinion that the present Sale of Food Acts were powerless to check the practice. The use of preservatives had become almost universal. Hardly any butter was now sold which did not contain from $\frac{1}{4}$ to 1 per cent. of boracic acid or borax; nearly all bacon was cured with salt and borax; while jams contained salicylic acid. The whole subject urgently called for proper State regulation. If preservatives were admissible, the fact that such were present in food ought in justice to be clearly notified by the vendor, so that the consumer might avoid them if he found they did not agree with him. The Council decided to apply to the Local Government Board to include in an Adulteration of Foods Bill all articles used in the preparation and flavouring of foods.

MUSTARD.

AT Manchester, on November 3, Mr. Rook summoned several persons for selling adulterated mustard. The first case was that of Aaron Walmsley, provision dealer, Talbot-street, Beswick, and Inspector Houliston stated that, on going to the defendant's shop on the 9th ult., he found the daughter, Sarah Alice Walmsley, in charge. He first purchased a quarter of a pound of pepper, and then asked for half a pound of mustard. The latter was served in a plain paper, on which there

was nothing to indicate that it was not pure mustard. He paid 7d. for the half-pound. Mr. Riley (chairman of the Bench): In calling for mustard, do you ever get pure mustard? Witness: Yes. I have purchased twelve samples and only two were wrong. Colman's, Keen's, and all the large manufacturers sell pure mustard.—Mr. Rook: If they are not pure, they are sold as condiments.—The Chairman: But what is called mustard—mustard that is used at the table—is not pure mustard?—Witness: No; it is a mixture, and it is generally sold us such. On Colman's tins of pure mustard are words to the effect that it is guaranteed pure, genuine, fine mustard, and when the condiment is sold it is labelled as a condiment. The Chairman: I was under the impression that pure mustard could not be used for table purposes. Mr. Rook, sometimes it is, but not often.—The Magistrate's Clerk: Mustard by itself, as I understand, will not keep very long.—Mr. Rook: Pure mustard is mostly used for medicinal purposes, and the purer it is the better it answers its purpose.—Mr. Estcourt, junr., said the sample in question contained 15 per cent. of wheaten starch.—Mr. Rook: You have analysed a large number of samples of mustard. How do you find them as a rule?—Witness: In the majority of cases there is absolutely nothing added. What happens often is that we find a little of the oil has been extracted, as the oil is used to cure rheumatism.—The Chairman: Can you say that quite 75 per cent. of the mustard sold by grocers is pure?—Witness: Yes, when sold as pure; but there is a great deal of the condiment sold—much more than the pure article.—Defendant, who is only in a small way of business, was fined 2s. 6d. and costs.—Defendant: Can I obtain the amount of the fine from the person I purchased the mustard from, because I bought it as pure?—The Chairman: Sue him in the county court.—Elizabeth Grimes, of 96, Chapel-street, Ancoats, was also summoned for selling mustard containing 15 per cent. of wheaten starch on the 23rd ult. to Inspector Houliston.—Mr. Rook said he was sorry to trouble the Bench with these cases against small shopkeepers, but it is quite as important that they should be summoned for offences of this kind as others who were in a larger way of business.—The magistrates said they believed that defendant had broken the law in ignorance, and would be fined 1s. and no costs.

SAGO.

AT Swansea, on November 2, Benjamin Thomas, grocer, Pentre Estyll, was charged with selling tapioca in substitution for sago.—Mr. Richards prosecuted, and Mr. Leeder defended.—Inspector Lambert said he visited the defendant's shop and bought a pound of sago, which was found to consist of 100 per cent. of tapioca.—Mr. Richards said that the prosecution did not think that there was any attempt to defraud, and thought that a small penalty should be inflicted, as a technical offence had been committed.—Mr. Leeder, for the defence, stated that a brother of the defendant served the sago, and he did not know the difference between sago and tapioca. If the Bench inflicted a fine in the case, ignorant people might think that the defendant had been guilty of an illegality, and that he had gained by it. He asked the Bench to give a contrary expression of opinion.—The Stipendiary said that the substitution of one article for another was an offence under the Act.—The defendant was called, and said he had lost a halfpenny by the sale.—Griffith Thomas stated that when he served the inspector he did not know the difference between tapioca and sago.—The Stipendiary said that this was a novel case. The customer was not supplied with that for which he asked. It did not appear that there had been any fraudulent intention, but there was negligence and ignorance. The Court of Queen's Bench had held that the substitu-

tion of one article for another, although it might not be done with fraudulent intent, came within the meaning of the Food and Drugs Act. Under the circumstances, they would impose a very light penalty, because there was no adulteration or fraud in the case. The defendant would be fined 3s. 6d. and the costs.—Two other cases were tried in which the inspector had been supplied with seed tapioca instead of sago, by David Jones, of the Royal Stores; and M. A. Thomas, Robert-street.—The Bench imposed similar penalties.

WARWICKSHIRE COUNTY COUNCIL AND ADULTERATION.

THE Sanitary Committee reported to the effect that in their opinion the proposed Sale of Food and Drugs Bill did not provide a sufficient strengthening of the law to deal with such evils that had been shown to exist, and recommended that the Council should so report to the County Council's Association. Further, the committee recommended that the County Council's Association be requested to consider whether a clause cannot properly be inserted in the Bill to provide that in all cases where articles are labelled as mixtures the percentage of such mixture should be clearly stated on the label, and likewise that it be represented to the same association that no notice to the effect that spirits sold in a licensed house were mixed should protect the seller unless it was proved that such notice was on the occasion of each sale brought definitely to the attention of the purchaser.

MEAT.

At Newcastle Police Court, on November 5, before Councillor Cooke and Mr. John Hall, John Spence, butcher, Hartlepool, was charged on two summonses with having exposed diseased meat for sale at Mr. Tindall's Mart, Newcastle. The summonses related respectively to two forequarters and two hind legs of a cow.

Mr. Holmes, on behalf of the Corporation Urban Sanitary Authority, prosecuted. He said the sirloins had been removed from the carcass, and the whole of the meat had been extensively peeled to take away the traces of disease. The beef was fortunately seized by Inspector Hedley, and afterwards destroyed by order of the Justices. The defendant, who was sent for, explained that he killed the cow on the advice of a veterinary surgeon, who concluded that because she had not eaten her food for some days, she had got some foreign substance about the stomach. Nothing wrong was noticed with the carcass by the slaughterer, and he was under the impression that no meat would be sold at Tindall's until it was thoroughly inspected. That, Mr. Holmes pointed out, was a common enough defence, but Mr. Spence had not taken the trouble to advise Mr. Tindall that an inspection might be desirable.

The Clerk: Some portions of the carcass were not sent?

Mr. Holmes: That is so. Having regard to the precautions taken to hide the traces of the disease, the committee considered the case an extremely bad one, and he was instructed to ask for the full penalty.

Inspector Hedley bore out Mr. Holmes's statement. The meat bore traces of tubercular deposit, and was in a bad condition. There were signs that it had been prepared for market, while the sirloins and flanks of the carcass had not been sent.

By Mr. T. J. Forster (who defended): The defendant could have found out that the animal was suffering from the disease by applying the tubercular test.

Mr. Forster commented on the fact that the prosecution had thought fit to issue two summonses, in order,

if possible, to prejudice the case against the defendant. Why they should do so in the case of a most respectable man who had carried on business with probity for 25 years he could not tell. He had advised his client to plead guilty to the two charges, but he thought the Bench would hardly think that he had knowingly sent this meat to Newcastle for the purpose of evading the law. The animal had been examined by a veterinary, whose opinion that the animal had some nail or wire in its stomach led him to kill it at a time when he was not exactly wanting a whole carcass in his shop. That was the reason why he sent the quarters and legs to Newcastle. He had no idea whatever that there was anything wrong.

The Clerk: What became of the other portions?

Defendant: I kept them myself, but destroyed them as soon as I found they were infected.

The Chairman said the Bench could not conceive that an experienced butcher like defendant did not know of the condition of the meat he sent to market. The case was a most serious one, and having regard to the manner in which it was attempted to conceal the traces of the disease, they would inflict the full penalty, viz., £10 in each case—£20 in all.

At South Shields, on Nov. 5, John Strathearn, 16, Pitt-street, Newcastle, was charged with offering for sale rabbits which were unfit for human food. The Town Clerk prosecuted and said that on Saturday night, the 23rd ult., the defendant was selling rabbits from hampers in the Market-place. The sanitary inspector's attention was called to their condition, and he found them in an unwholesome and decomposed state, and had them removed. Dr. Dalziel afterwards examined them and condemned 10 out of 15 as unfit for human food, and those rabbits were subsequently destroyed on a magistrate's order. The practice of selling unwholesome food in the market should be put down with a strong hand, and he therefore asked for a substantial penalty.—W. E. Ornsby, inspector of nuisances, bore out this statement.—Mr. J. Pollock, meat inspector, and Dr. Dalziel also gave evidence, the latter stating that one of the rabbits was covered with maggots. He condemned 10 out of the lot. The flesh was a dark green in colour and stank.—Defendant said he had come to the market-place with rabbits for three years, and no charge like that had ever been made against him before. The rabbits were quite fresh when he put them into the hampers on Saturday morning, but the weather was very warm and must have turned them while they were packed.—The Bench imposed a fine of £5 and costs.

At the Glasgow Central Police-court, on November 5, Peter Harrity, of 180, Gallowgate, and Eliza, his wife, were charged with having had in their possession at their shop in the Gallowgate 250 lbs. of pork which was unfit for human food.—The prisoners admitted the charge in so far as it concerned 20 lbs. of pork ribs and 10 lbs. of pigs feet, which had been exhibited in the window, and 10 lbs. of meat on the counter of the shop. They denied having had 190 lbs. of unwholesome pork in the back shop.—This plea was accepted, and a fine of £5 was imposed, with the alternative of 30 days' imprisonment. The fine was paid.

SPENT GINGER.

At the Glasgow Sheriff Summary Court, Sheriff Fyfe presiding, Peter D. Wighton, grocer, 120, Stockwell-street, was charged, at the instance of the sanitary authorities, with having, on Tuesday, June 20, sold to Inspector Hamilton a quarter of a pound of ground ginger, which on analysis by Mr. Tatlock was found to contain 69 per cent. of spent ginger. A plea of "Not guilty" was tendered, and respondent was defended by Mr. Wm. Borland, writer, while Mr. John Lindsay,

assistant clerk of police, appeared for the prosecution.—Inspectors Hamilton and Armstrong, of the Sanitary Department, deposed to the purchase of the ginger, for which they paid 2½d.—Mr. R. R. Tatlock, one of the city analysts, testified that he analysed a portion of the ginger, and found it to contain 69 per cent. of spent ginger, or ginger from which the essential oil had been extracted for the manufacture of ginger beer. In cross-examination, Mr. Tatlock said that the sample contained 52 per cent. of soluble ash, which was a very small percentage, and 10·2 per cent. of cold water extract, which was above the minimum. In his opinion, the ginger was not of the nature, substance, and quality demanded.—Mr. Wm. Robert Lang, B.Sc. and F.C.S., and senior assistant to the Professor of Chemistry in Glasgow University, said that in his opinion the article supplied was of the nature and substance of ginger, but of poor quality.—The Sheriff, in giving his decision, said that what was asked for here was ground ginger, and what was delivered in response to that inquiry was a quarter of a pound of a substance which, in appearance, at all events, was ground ginger. The ginger had been analysed, and the evidence of two analysts had proceeded on practically the same basis of fact. Mr. Tatlock had come to the conclusion that the ginger was not of the nature, substance, and quality of ground ginger, while Mr. Lang maintained that the nature and substance were of ground ginger, although the quality was poor. In these circumstances, and in the light of the other facts disclosed by the analysts, he hardly thought the evidence sufficient to enable him to convict the respondent. Besides, according to the evidence, there was great variance in the price and quality of ground ginger. His Lordship accordingly assolizied the respondent, no expenses being allowed.

SUPPOSED DEATH FROM LEAD-POISONING AT WOLVERHAMPTON.

MR. W. H. PHILLIPS held an inquest on November 5, at Wolverhampton, on Martha Alice Horton (17), an employe of the Chromographic Enamel Company, who died after a short illness on Wednesday.—The Coroner said the deceased presented all the appearances of having suffered from blood or lead-poisoning.—Catherine Horton, the mother, said deceased had been employed by the Chromographic Enamel Company, Limited, for about 18 months. On Wednesday week she came home complaining of a headache. She was sick, and vomited. She used a muslin "muzzle" in her work, this being supplied by the employers. She said she was unable to keep it on all day, but had to take it off occasionally to breathe more freely. The other sister, who was employed at the same works, was at present unwell, exhibiting the same symptoms. Deceased had never had a previous illness.—Witness said, in reply to Mr. Ashworth (Inspector of Factories), that sometimes the muzzle was dirty. Deceased had never said that she had been cautioned by the firm for not wearing it.—Dr. Mactier said he had seen deceased last Friday and on the Sunday, and had come to the conclusion that she was suffering from lead-poisoning.—Mr. Ashworth said he had frequently visited the works, and he thought the firm did everything they could to ensure safety. The fans where the two girls were employed were, however, inoperative.—The Coroner remarked that the case was of very great importance, although there might be no blame attaching to the employers, and he should adjourn the inquest for a week.

MILK.

At Gosport Petty Sessions Emily Wright, trading as the West of England Dairy Company, High-street,

Gosport, for whom Mr. C. Blagg, of Portsmouth, appeared, was summoned for selling milk adulterated with 9 per cent. of added water.—Mr. G. H. King of Portsmouth, prosecuted, and evidence was given by Mr. C. H. Davies, Inspector under the Food and Drugs Act, that on the 10th ult. he saw a man named Kayes selling milk at Ann's Hill and asked for a pint of "new milk." Analysis proved that the liquid had been adulterated with 9 per cent. of water.—For the defence, Mr. Blagg admitted that the water had been added to the milk in question, but submitted that since the man Kayes was stopped by the Inspector a watch had been kept upon the milk in the dairy, for the servant had been seen on more than one occasion to help herself to some milk and fill up the deficiency with water. To the conduct of the girl, he contended, that charge was due, and on this ground he appealed for lenient treatment.—The Bench, taking this defence into consideration, inflicted a fine of 10s. and costs.

At Sunderland, on November 5, James Brumwell was charged with selling adulterated milk on September 26.—Mr. F. M. Bowey, the Town Clerk, appeared for the prosecution.—Inspector Horsman deposed to purchasing a pint of milk from the defendant in Back North Ann-street on September 26 last. Defendant told him he was selling it for his brother Thomas, of 17, Hudson-road. The milk was adulterated to the extent of 43·76 of water.—The Town Clerk remarked that it was a gross case of adulteration, but he did not wish so much against the boy who sold the milk as against the brother who employed him.—The magistrate dismissed the case against James and fined Thomas £5 and costs.—Alfred Wayman was charged with a similar offence in General Graham-street on September 30.—Inspector Downs spoke to purchasing the milk, and the analysis showed 6·94 per cent. of added water.—Defendant was fined £2 and costs.

At Cardiff, Mrs. Mary French, confectioner, was summoned for having sold to the inspector under the Food and Drugs Act, on October 4, milk adulterated with 12 per cent. of added water.—Defendant pleaded that she sold about three quarts a day only, and that she had sold the milk as she had bought it. She called witnesses to testify as to her character.—The Stipendiary said that it was not necessary that she should adulterate the milk to make her liable. She should protect herself by having a guarantee from those she bought the milk from. A fine of 40s. and costs was imposed.

TUBERCULOUS MILK OUTSIDE THE FOOD AND DRUGS ACT!

At a meeting of the Liverpool Corporation, at the instance of Mr. Shelmerdine, a letter from the Clerk to the Cheshire County Council relating to cases of infected milk was read.

Following thereon, Mr. Shelmerdine said that the result of the bacteriological tests which had been ordered by the Council some time ago distinctly showed that 29½ per cent. of the milk coming into the city had tuberculosis. How did the chairman and the medical officer reconcile their former statements with that? The Liverpool milk dealer should feel it necessary, when settling his contracts for supply, to require a guarantee from the person supplying him that the milk was absolutely free from diseased matter. Diseased meat and diseased fish were less dangerous than diseased milk, and the vendors of the former were prosecuted, while those of the latter were not. It was wrong to prosecute one sinner and leave the other alone. He moved that directions be given to the Committee to take a test case.

Mr. Colton, who seconded, said that the Committee

knew the vendor of the contaminated milk, and yet they had taken no steps to prosecute.

The Town Clerk said that, under the Sale of Food and Drugs Act, milk could be dealt with if the prosecution took steps in conformity with the Act, which directed the taking of three samples. In the case referred to by Mr. Shelmerdine that was not done, and it was two months before the result of the bacteriological examination was obtained.

Mr. R. E. W. Stephenson observed that it had not yet been conclusively shown that tuberculosis in meat and milk was inimical to the human family. It would be harassing to prosecute traders until the Corporation were aware whether the goods sold were dangerous to the public health or not.

Alderman Smith said that the committee looked carefully after persons who mixed water with milk, but when they came upon something likely to prove fatal, especially to children, there was no indication given to the Council that the committee intended to bestir themselves, although from examination they believed it to contain tuberculosis. They simply sat down and said, "We have no power to deal with this." Let a prosecution be tried, so that it might be found what power there was.

The Town Clerk pointed out that the Royal Commission on Tuberculosis had come to no conclusion on the question, but, as an individual member of the Commission, he should be sorry to eat meat or drink milk with a tubercle in it. Some other members having spoken,

Mr. Shelmerdine intimated that he would withdraw his amendment, and this course was permitted.

ADULTERATED AMERICAN FLOUR.

THE attempts to adulterate American flour are constant. Maize meal is frequently employed, and the following letter, sent to American millers, indicates another form. The document is as under:—

"Chicago, September 11, 1897.

"Gentlemen,—We expressed you sample powdered starch. On examination, you will, no doubt, have noticed the dryness and whiteness. We are doing a large business with the winter wheat mills, and would very much like to interest you, to the extent of a few barrels or bags, as an experiment. We would be pleased to have our Mr. Hagen give you a personal call, on his return from the East.—Yours truly,

"THE GLUCOSE SUGAR REFINING COMPANY."

The *North-Western Miller*, of Minneapolis, very rightly denounces this abominable endeavour to induce a form of fraud which is peculiarly reprehensible, and which is, no doubt, difficult enough to detect so as to bring the offence home to the right persons. But it is not only in regard to the crusade that seems to have been entered upon by the American milling Press in respect to adulteration that we would direct the notice of our readers; the same organ of Transatlantic milling referred to above has a very interesting communication on the subject of the more punctual transmission of flour on export account. From some correspondence that appears in a recent issue of our Chicago contemporary, we gather that at last some of the big shipping companies are waking up to the necessity there is for treating American millers with a consideration commensurate with the magnitude of the trade itself. The Allan line has, it seems, guaranteed shipments by specific steamers, and this is only the beginning apparently of a new era, for the *North-Western Miller* writes:—

"The Allan line is not alone in being willing to guarantee shipments by specific steamers, provided shippers, in turn, will guarantee shipments on the dates

arranged, or pay for the room engaged if freight fails to arrive in time for loading."

The real crux seems to be the *laches* of many millers themselves, and very properly our contemporary goes on to say:—

"It is a fact that, if millers really desire to secure prompt delivery for their customers, they must, first of all, see to it that the contracts they make with the steamship lines are faithfully carried out. If some of the large Western millers, and notably two concerns in Minneapolis, who have calmly disregarded their freight engagements with steamship lines, had their place of business in New York city, and were members of the Produce Exchange, they would soon find that what they regard as merely unimportant neglect was, in reality, a serious breach of contract, and they would pay for the freight room pre-engaged by them, or be publicly discredited. No seaboard shipper thinks it possible to engage room in a ship and fail to occupy it with freight, without paying for dead room. Western millers have need to wake up to their responsibilities in this direction."

DRUG ADULTERATIONS.

THE committee of the American Wholesale Druggists' Association reports that the practice of adulterating drugs is certainly on the decrease, owing possibly to the low prices which have existed during the past few years, and also to the increased facilities buyers have for detecting fraud of all kinds. Trade journals, says the report, are quick to notice anything of this kind, as it makes a good item for the reporters to work upon. Wholesale druggists buy the best goods possible, and sell them at a fair profit, but frequently have another grade with which to meet unfair competition, but do not sell such for "pure." Department and general stores in some sections of the country demand "commercial" quality, and are not willing to pay for high-grade goods. The report takes up the different goods handled by the trade. Of C. P. acids it says that one maker quotes "C. P." at one price, and "Strictly C. P." at a much higher figure. Cream of tartar and gum opium and gum asafetida are generally of good quality. Pod musk is frequently "loaded" with fine lead shavings. A lot received by one druggist had about 20 per cent. of weight in lead. As the price ranges from 14 to 16 dollars per ounce, it pays to examine such goods closely.

Of powdered drugs the report says:—These offer an unlimited field for sophistication, and can be obtained from some manufacturers to fit any price; as an instance of this, a sample of powdered black pepper was shown which actually contained no black pepper at all, and yet was very much like the genuine article, and could be sold for "pure" to anyone who was careless about examining the quality. Powdered asafetida frequently contains sand and chalk. Gum arabic, sugar, starch, nux vomica, castile soap, gentian and fenugreek are frequently doctored with sand or cornstarch. The committee thinks, however, that a jobber who sends an open or mail order to a reliable drug miller for powdered goods will receive strictly pure, unless he specifies otherwise. Of essential oils the report says:—

"There never has been a time when these goods did not receive the greatest attention from the manipulator, and no doubt that greater frauds are practised here than anywhere in our line."

Oil of sweet almonds frequently contains sweet oil; oil peppermint is doctored with sassafras or camphor, or has been robbed of most of its menthol by a process of skimming; lemon, orange and bergamot contain turpentine and paraffin; oil cassia contains resin, balsam copaiba and oil of cloves, and filtered oil cassia is always impure; lard oil frequently contains a large

amount of neutral oil, and even turpentine, used as an adulterant so largely, is itself a prey of the manipulator. Chemicals are said to be uniformly of high standing.

In conclusion, the committee suggests the employment of an expert chemist to act under the direction of the chairman of the Committee on Adulteration, and examine suspicious articles, and that the members of the association be informed of any cases of adulteration discovered by him.

A NOTED HUDDERSFIELD WELL.

In his quarterly report, Mr. Ernest George Aunis, medical officer of Health, Huddersfield, says:—

"Bearing in mind the disastrous consequences which have overtaken Maidstone in connection with its water supply, it may be of interest to note the effect which habit and sentiment produces upon people's minds in connection with a well which has attained a high standard of repute for its good qualities in this borough, but which has aroused my suspicions that its extraordinary qualities were not altogether as alleged, and a sample was taken, submitted to the borough analyst for analysis, when he certified it as being contaminated by sewage matter, and unfit for drinking purposes, so that unless I find it reasonably possible to obtain the removal of every source of pollution in the neighborhood it may be necessary to obtain an order to permanently close this water supply, which course, however, I am perfectly aware would arouse a storm of opposition, as it is asserted in the neighbourhood that no water, not even the Corporation water, is nearly so good for culinary purposes."

It was the same with the Broad-street pump, which spread cholera broadcast. The fame of the water was such that one old lady from Hampstead sent her servant daily for a bottle of it. She was attacked with cholera, whilst members of her family who did not drink the sewage polluted water escaped the disease, yet hundreds resented the closing of that pump, as they declared no water had so pleasant a taste.

DR. HARRISON ON LINCOLN WATER.

DR. HARRISON states: "That the water, after filtration, as supplied, contains an excess of organic matter, making it only a second-class water; that the sources of the water are polluted by drainage from land highly cultivated and occasionally manured with nightsoil, water from such source is dangerous; that the quantity available is not sufficient for the wants of the city; that the filter beds are capable of filtering more than a million gallons daily; and that it is not advisable to take the water from the river Witham for the supply of the city of Lincoln."

Commenting on this, the *Lincolnshire Echo* says:—"There would appear to be no doubt that the Upper Witham at the present time receives sewage contamination from the Bracebridge Asylum, at a point above the intake, and Lincoln consumers not only need assurance for the present time, but they should be left in no doubt that either the Witham will not be drawn upon for domestic purposes, or, in the event of dire necessity, that they should have ample warning before this source is resorted to."

The publicity we have given to the warnings of the Medical Officer of Lincoln, and the attention which has been from time to time directed through our columns to the possible sources of water contamination, will have served a most useful purpose if the Corporation take immediate steps to minimise, if they do not altogether avert all possibility of danger. The discussion raised by Mr. Turner at the Council meeting last Wednesday evening elicited an expression of

opinion from the water engineer and from Ald. Maltby, and whilst both these gentlemen take an optimistic view of Lincoln's position in regard to water, it will be additionally reassuring to the citizens to learn that the inlets of *objectionable effluent at Bracebridge* are to be "seen to as speedily as possible."

If, in spite of these warnings, Lincoln is some day visited as Maidstone and Lynn are, the water committee have no defence, for their medical officer has not only done his duty, but has done it under discouragement.

AMERICAN LARD.

THE following are the various lard products obtained in the United States:—(1) "Neutral" lard or "kettle" lard, almost exclusively used for the manufacture of margarine. (2) "Leaf" lard, originally obtained by melting the whole flare with steam, followed by pressure. The flare is now chiefly used for the preparation of neutral lard, which commands a better price. (3) "Choice kettlerendered" lard obtained from the flare not used up for neutral lard, and from fat from the back of the animal. (4) "Prime steam" lard of all the fatty parts of the hog. (5) "Butcher's" lard melted on an open fire. "Off grade" lard, a lard of lesser value prepared from salt fat. (7) "Dead hog grease" prepared from diseased hogs; "brown grease" prepared from the intestines. "White grease" prepared from the other parts.—(8) "Yellow grease" prepared from the waste of the packing warehouse. (9) "Pigs-foot grease" obtained from the glue factories. "Prime steam" lard is raw lard of soft, almost oily consistence, which hardens at low temperatures. It is melted and crystallised at 10° to 15° C. In winter it is pressed out at 7° to 13° C., in the summer at 13° to 18° C. The lard oil thus obtained is used for lighting purposes, and the remaining fat (lard stearine) mixed with ordinary steam lard to give the mixture sufficient firmness, the whole is then put on the market as "refined" lard. The "refining" process sometimes includes the use of a mixture of pressed tallow and vegetable oil.—*Pharm. Woch.*, xiv., 428, after *Deutsche Fleischerzeit.*

PROPOSED BACTERIOLOGICAL LABORATORY FOR CHESHIRE.

AT the monthly meeting of the Runcorn Urban District Council, on November 4, Mr. S. Taylor presiding, the Health Committee submitted for approval a memorial to the Cheshire County Council urging the establishment of a laboratory for the bacteriological and analytical examination of water, milk, diphtheric secretion, etc. It was pointed out in the memorial that the serious epidemics now prevailing in various places were attributed to the pollution of water supplies, and the difficulty of diagnosing diphtheria and phthisis in their earlier stages was referred to. The consumption of milk from tuberculous cows was believed to be the cause of much phthisis. While the County Council had a chemical analyst under the Food and Drugs Act, they had no bacteriologist. In a county so largely engaged in agriculture, rearing of cattle, and the sale of milk and its products as Cheshire it was obvious that the early detection of tuberculosis in cattle was of vital importance, rendering the preparation and distribution of tuberculin for test purposes under the supervision of a veterinary expert a most desirable object and a necessary measure of precaution in safeguarding health. The memorial was unanimously adopted.

MR. A. LINDON, R.P.C. Assoc. San. Inst., Assistant Inspector Walthamstow Urban District Council, was appointed Sanitary Inspector to the Shoreditch Vestry, out of 53 candidates, at last Tuesday's Vestry Meeting.

PORTSMOUTH AND A REFUSE DESTRUCTOR.

In my predecessor's report for last year the following occurs:—"This subject, which has been talked of for many years now, seems within the realm of practical politics; it has been considered by the Sanitary Committee frequently, and the results of their deliberations will be reported to the Council shortly, it is hoped." I am sorry to have to report (says the Medical Officer of Health, A. Mearns Fraser, M.B., D.P.H.) that the destructor is still a thing of the future for Portsmouth. I feel most strongly that until an effective destructor is erected, an important factor in the health and well-being of the borough is being neglected, for the time has passed when a large town can afford to dispose (?) of its refuse by dumping it down in various places. Wherever a refuse heap is erected I receive large numbers of letters from indignant, and justly indignant, residents in the neighbourhood, complaining bitterly of the intolerable nuisances of flies, dust, and smells to which they are subject, from which they naturally look to the sanitary authority to protect them. A borough can no more afford to trifle with its health than an individual, and as certainly as we establish these heaps of dirt and refuse about the town shall we assuredly reap ill health and disease in the future. I trust that before I present my next report a more scientific method of refuse disposal may be an established fact.

FOOD AND DRUG ACT INSPECTION IN AMERICA.

(Concluded from page 538.)

"*Blood Purifiers*."—An examination of the so-called "sarsaparilla" remedies, or "blood purifiers," was made in 1892, and in nearly every instance the remedy was found to contain iodide of potassium in variable amounts.

The following general comments upon these preparations were made in the report of that year:—

With but few exceptions they contain a considerable percentage of a very active and powerful remedy, the iodide of potassium. . . . The sale of such an article in unlimited quantities by druggists, grocers and others is censurable. More than this, the method of its sale is dishonest, since the unwary purchaser is led to believe that he is purchasing a harmless vegetable remedy, namely, sarsaparilla.

It may be seriously questioned whether the blood of persons who take iodide of potassium continuously is not decidedly impoverished, instead of being purified, as is claimed by the manufacturers. It is not uncommon to find persons who have used continuously six, eight, or ten pint bottles of one of these preparations.

Unlike sarsaparilla, the iodide of potassium is classed among poisons by nearly every writer upon toxicology.

The Board quotes several noted authorities upon this subject. The pale, sallow complexion of the habitual user of the "sarsaparilla iodides" is unfortunately too often met with, wherever these remedies are freely advertised and sold.

The following list presents the percentage of iodide of potassium found in those samples which have been submitted to the analyst for examination:—

"So-called," Sarsaparilla Remedies.

| NAME. | Per Cent. of Iodide of Potassium. | NAME. | Per Cent. of Iodide of Potassium. |
|-------------------|-----------------------------------|------------------------|-----------------------------------|
| Wilson's ... | ... 0.32 | Coleman & Co.'s ... | 0.83 |
| Howe's ... | ... 0.33 | Bass's ... | 0.84 |
| White's ... | ... 0.38 | Brown's ... | 1.00 |
| No name ... | ... 0.41 | Leavitt's ... | 1.00 |
| Charless ... | ... 0.41 | Moriarty's ... | 1.11 |
| Mahern's ... | ... 0.41 | Dana's ... | 1.17 |
| Ayer's ... | ... 0.45 | Woodward's ... | 1.33 |
| Bartlett's ... | ... 0.50 | Dudley's ... | 1.50 |
| No name ... | ... 0.50 | Cherry & Wingate's ... | 1.55 |
| No name ... | ... 0.50 | Jaynes's ... | 1.59 |
| Packard's ... | ... 0.58 | Nims's ... | 1.67 |
| Raynsford's ... | ... 0.58 | Cherry & Wingate's ... | 1.67 |
| Adams's ... | ... 0.75 | Mattison's ... | 2.00 |
| Broad & Co.'s ... | ... 0.75 | Myrick's ... | 2.12 |
| Hood's ... | ... 0.75 | Leavitt's ... | 2.17 |
| Hutchinson's ... | ... 0.75 | Church's ... | 2.25 |
| Dr. White's ... | ... 0.75 | | |

The active ingredient was in nearly all instances the iodide of potassium, but in one or more of the samples the analyst states that the iodide "was in the form of iodide of iron, and in others probably the sodium salt."

In 1895 the attention of the Board was called to some cases of lead poisoning which had followed the use of certain carbonated syrups and other drinks of an effervescing nature. An examination was made, which resulted in finding that the stoppers of the bottles used for holding these drinks were often made in part of lead, the amount varying in 50 different samples from as low as 1 per cent. to a little over 50 per cent. of lead; and the contents of the bottles also contained variable amounts of lead, the maximum being in the proportion of 0.27 grain per gallon. This quantity would probably vary with the length of time during which the contents were exposed to the lead stoppers.

The following preparations were found to contain cocaine:—

Dr. Birney's Catarrhal Powder was found on analysis to contain hydrochlorate of cocaine, and according to the label each bottle contains 2½ per cent. of this drug, with other ingredients.

Instant Cold Relief, made by the Instant Cold Relief Company, of Taunton, contains cocaine with sugar of milk, menthol, and common salt.

The danger in using remedies containing cocaine consists in the liability to the formation of a cocaine habit. Instances have been cited in which persons purchasing this remedy have used a half-dozen bottles per day, with the result of producing permanent injury to health. According to the U. S. Dispensatory, the habitual use of cocaine "readily grows upon the individual, and the inveterate user can be recognised by his uncertain step, general apathy, sunken eyes, trembling lips, foetid breath, etc. Incurable insomnia is apt to be developed, emaciation becomes extreme, dropsy appears, and even death results. Poisoning and even death have resulted both from its internal administration and its local use."

Kaskine, a much vaunted remedy, sold at one dollar an ounce, was found to consist of nothing but granulated sugar.

Modene, an empirical preparation for removing hair, was found to consist of calx sulphurata (sulphurated lime).

Ozonos, a proprietary disinfectant, was found to be a solution of permanganate of potash.

Information in regard to different brands of adulterated spices and other articles of food may be found in the twenty-first annual report of the Board (1889).

Names of brands of French peas coloured with sulphate of copper (blue vitriol) were published in the weekly bulletin of May 9, 1891. That portion of the bulletin which contains the monthly food and drug report contains considerable additional information upon special subjects, which is published as occasion requires.

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The Day's Snap

Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

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Food and Sanitation.

SATURDAY, NOVEMBER 20TH, 1897.

THE ADULTERATION OF FLOUR.

THE adulteration of flour in the United States has made such progress that the St. Louis millers have brought a Bill into the State Legislature for its abatement. Supporting this measure the other day, the State Governor, Mr. E. O. Stanard, thought this was a most important subject. If the Bill which had been presented by the St. Louis millers were not a sufficient safeguard, it might be amended, or some suggestion made for the presentation of a better Bill to Congress. But he considered that it was necessary to have some national legislation. American millers had been considering how greater facilities might be obtained for the distribution of American milling products throughout

the world. That was a matter of great importance, but they all knew that for the last few years there had been a great deal of mixing of maize flour, ordinarily sold as corn flour, with wheat flour. There was nothing more generally and absolutely known than the work which was being done by the millers relative to mixing maize flour with wheat flour. There was no miller but knew from his own experience that the price of flour had been reduced anywhere from 30 to 60 cents. per barrel over a very large proportion of that country, due to the fact of that mixture. It might be said if Americans did not mix maize and wheat it would be mixed on the other side of the ocean. It might be there were men as dishonest on the other side of the ocean as in the States. He believed that was so, but he did not believe that the mixture of flour with maize meal or maize meal with flour would be tolerated there in any marked degree, and their reputation would suffer there as much as upon the American side of the Atlantic. Now as to the men who went into that mixing business. While it paid at first, it was not paying now; they got into each other's habits and cut it down so that the mixers were scarcely able to make any money in their works, but if they were not making any money, what were the millers doing that were making straight flour—what could they do? It were well if they advertised not only to the dealers, but to the consumers who were deceived, that certain parties were mixing 10 to 45 per cent. of corn flour with their wheat flour. Blending did not cover the case. Blending meant mixing spring wheat with winter wheat; it did not mean mixing maize with wheat. His experience led him to believe that, although many men who were mixing maize flour with wheat flour told the purchaser that it was mixed, there was no information yet that the consumer who bought it second-hand had been informed, or would be informed, as to what the flour was made of.

TO PROTECT THE PUBLIC FROM ADULTERATION.

THE "DAILY MAIL'S" LITTLE PLAN.

In spite of the explicit laws against adulteration and dilution of food and drink, writes a contributor, every one knows that he seldom gets the article he pays for. Milk is never sold as it comes from the cow, butter is hardly ever free from an admixture of margarine, coffee mixtures are so constituted that it would be almost as difficult to discover a grain of Mocha or Mysore in them as to find a drop of Thames water in the English Channel, intoxicating drinks are doctored and diluted that the drinking public must be defrauded of many millions of pounds a year. And, of course, as long as adulteration is permitted to remain highly profitable, it will continue to be practised.

And the means in use for preventing adulteration are confessedly a failure. The vendor is too clever for the inspector, the inspector does not appear to be too keenly alive to his duty, and, worst of all, the magistrate rarely imposes a penalty that is not covered a hundred times over by

THE PROFITS EARNED.

In these circumstances it is time that the community devised some effectual measures for its own protection. The success with which the Customs and Excise Departments carry out their work suggests that at least one way of checking the adulteration fraud is by making the Customs a more general concern, and by substituting a fixed "duty" for the variable and inadequate fine in court.

The advantages of the "duty" would be manifold. In the matter of milk, for instance, the great difficulty arises from the fact that the Somerset House standard is so low as to make allowance for the worst cow in the country. There are 10,000,000 cattle in the United

Kingdom, and among them there must be some sorry specimens. But, as it is lawful to dilute the milk of the best cow with water and deprive it of cream down to the standard of the worst, of course the milk, as it is sold to the consumer, is of wretched quality for the most part. But if milk of a good nourishing quality, such as one would find in the average milk-pail when taken from the cow, were allowed to go duty free, while while all milk of a poorer quality was taxed, the duty rising as the milk grew more watery, the effect would be magical. Any one desiring to sell milk under the standard quality could be compelled to label the containing vessel, whether in the shop or in the street, with a statement of the quality, and the penalty for trying to escape the tax could be fixed at double duty and forfeiture as in the case of tobacco.

There may be something in such a plan not apparent at the first blush which renders it impracticable. Obviously it would not be possible to carry it out as thoroughly as it is in the case of the present dutiable articles. But all that is contended are the undoubted facts that the revenue authorities do their work better than the food inspectors, and that a fixed penalty, as nearly inevitable as the revenue officers have the art of making it, would be more effectual than the variable penalty now in vogue.

SWEETS AND CHEAP CONDENSED MILK.

MR. E. N. WOOD, deputy coroner, held an inquest at Bermondsey Town Hall, on November 5, touching the death of Alice Isabel Woolridge, aged six years, the daughter of a coal dealer, residing at 36a, Fendall-street, Bermondsey.—Henry Woolridge, the father, stated that his child was somewhat delicate. On Monday she was sick, and on getting worse he called in doctor, but death occurred at 1.30 on Tuesday morning.—Dr. J. H. Cuolahan, of 40a, Grange-road, Bermondsey, stated that when he was called to the child it appeared to be suffering from some irritant poison. Her mother told him she (deceased) had been in the habit of eating a quantity of sweetmeats, and knowing that many sweets were coloured with injurious ingredients, he made special search and test at the post mortem examination to see if he could find any traces of arsenic or copper. Death he discovered, was due to coma, supervening an acute gastric catarrh, but he could not find any traces of the poison mentioned.—The Coroner: Do you think this gastric catarrh was set up by anything the child had eaten?—Witness: Yes. In many cases where a child has a weak stomach a quantity of sweetmeat or sugary food, though quite pure, will cause an excess of acetic acid to be set free, and this will inflame the mucous membrane. He considered the death of the deceased was caused by her taking a quantity of sweetmeat on a previous weak stomach.—The Coroner's officer (Mr. Jupe): The mother said she threw the sweets which the child had been eating on to the fire.—The Coroner: Nobody ever analyses these sweets which are sold to children. I never head of it being done, and I am sure there are many which make children ill.—A juror: Yes; there are some very curious sweets sold at 2d. per pound, and they can't possibly be good. (Hear, hear.) Some of these ought to be analysed, and the authorities should take the matter in hand.—The Coroner: It seems that milkmen are the only people who get their goods tested. (Laughter).—The Coroner's officer: Many of the utensils used for making sweets in are copper, and I know that often they are not cleaned properly.—The Coroner (to the jury): the sanitary authorities have power to test any food and to visit sweetmeat factories. If you care to send a recommendation to the proper authorities you can do so.—A juror: The sanitary authorities ought to be woke up on these matters. There is no end of this cheap condensed milk sold to the public at 2d. a tin, which is not fit for food,

and it ought to be stopped.—The Coroner: Yes, it is very unfair that native produce should be tested and this foreign stuff allowed to pass. (Hear, hear.) Some of these tinned stuffs are kept in stock for years and cannot be good. But I think it would not be advisable to send a recommendation to the authorities on this question of cheap sweets until we have something more given in evidence to go upon.—After some further discussion on the administration of the Food and Drugs Act, the jury returned a verdict in accordance with the medical evidence.

THE SALE OF POISONS.

AT Bow-street, on November 12th, Joseph Wallace, homœopathic practitioner, Albany-terrace, Regent's Park, was summoned for selling a poisonous drug to a person not known to him, without inquiry, without labelling the article as a preparation of aconite or as a poison, and without entering particulars of the sale in a book provided for that purpose.—Mr. Bodkin supported the summonses on behalf of the Treasury; Mr. Schultess Yongg defended.—The case first came before the Court a few weeks ago, when Dr. Luff (Official analyst to the Home Office) stated that a preparation made by the defendant (known as Wallace's Specific No. 1) contained in a fluid ounce one-twenty-third of a grain of aconitine, a powerful poison. The case was then adjourned to allow Dr. Luff to prepare the tincture according to the defendant's specification, in which way, it was contended, the aconitine would be decomposed and rendered harmless and inert.—Dr. Wynter Blyth, Public Analyst to the parish of St. Marylebone, on behalf of the defendant, said he had analysed six bottles of the defendant's tincture, with identical results. He had prepared a mixture from Dr. Wallace's specification, and obtained a tincture practically identical with that in the bottles sold by him. The effect of the process upon the aconite root employed would be to split up the aconite it contained into practically inert and harmless compounds. The action of whiskey containing tannic acid would precipitate the remaining alkaloids, which would be removed by filtration, with the exception of a small quantity held in solution by the alcohol. Mr. Bodkin: Did you experiment upon animals for the purposes of this analysis?—Witness: Yes; I am a human animal, and I experiment upon myself. (Laughter).—But upon the lower animals—mice, for example?—No; I did not think it necessary, and I am not licensed to do so.—The Rev. John Henry Neville, vicar of Stoke Gabriel, Devon, said he was present at the last hearing of this case, and on that occasion swallowed, by way of experiment, the contents of a bottle of defendant's mixture.—Mr. Bodkin: And you are still alive? (Laughter).—Witness: Certainly, and quite well, thank you. (Renewed laughter).—Mr. Bodkin: I do not dispute that there are case-hardened individuals who can swallow almost anything (laughter), possibly even a bottle of this mixture. (More laughter).—Witness: I am not a case-hardened individual. I think Mr. Bodkin is far more case-hardened than I am. (Loud laughter).—Mr. Bodkin: It may be so.—Witness went on to repeat that he had suffered no ill-effects from the bottle of mixture. On the contrary, it at once cured him of an attack of toothache from which he was suffering.—Mr. Young: Ah! ah! That might have been the whiskey. (Laughter).—Witness: I do not think so.—Dr. Arthur Luff was recalled by Mr. Bodkin. He stated that since the last hearing he had prepared this mixture according to defendant's specification, and found as a result that there were 1.20th grain of aconitine to the ounce.—Mr. Lushington said that whatever might be the weight of evidence as to the varying effect of this mixture upon mice and men he had no doubt that it contained an appreciable portion of aconitine, and that it might be injurious to men, although in some

cases a bottle might be taken without injury. Defendants would have to pay £5 with respect to each of the four summonses against him.—Mr. Bodkin said this case had cost the Treasury a very heavy sum, irrespective of legal expenses. In fact, he thought the incidental expenses would amount to at least £50. Mr. Lushington thereupon ordered defendant to pay 40 guineas costs on the first summons, and 2s. costs on each of the three others.—Mr. Young asked Mr. Lushington to accept sureties with a view to an appeal, and Mr. Lushington said he would accept two in £100.

MILK.

At the Newport Police-court, on November 10, Mrs. Elizabeth Robbins, of 72, Commercial-street, appeared to answer a charge of selling adulterated milk.—Inspector Jones purchased a pint of milk at the defendant's shop, and the certificate of the analysis of the milk showed that the milk contained 6 per cent. of added water below the limit allowed.—Mrs. Robbins stated that she had been selling milk for 20 years and complaint had not been made during that period against her.—The Town Clerk only asked for a nominal penalty, and Mrs. Robbins was fined 10s. including costs.—James Harper, milkvender, a sample of whose milk was certificated to contain 7 per cent. of added water below the standard, stated that he sold the milk as he received it. He handed up an agricultural journal, and the Town Clerk read out a paragraph which stated that the champion cow at a recent agricultural show gave milk in the showyard, which, on being analysed, was found to be below the standard, and if it had been sold, the seller would have been liable to be prosecuted for selling adulterated milk. The Bench, however, said that the standard was a low one and that the public must be protected, and defendant was fined 15s. including costs.

At Leeds, on November 10, John Carter, Pigeon Cote Farm, Seacroft, was charged before Mr. Coghlan and Mr. Ford with selling new milk on October 22 which was adulterated with water.—Inspector Walker had made a purchase of milk from the defendant, and the City Analyst (Mr. Fairley) had certified it to contain 18 per cent. of added water. The defendant had been three times convicted of similar offences, and he was now fined £10 and costs.—The Town Clerk (Mr. Harrison) prosecuted, and Mr. Carter defended.—The same magistrates fined Frank Toy, provision dealer, 59, Richmond-road, Bank, Leeds, £2 and costs, for selling 1lb. of butter, on October 1, which the City Analyst certified to contain 73 per cent. of foreign fat.

At Gosport, on November 5, Emily Wright, trading as the West of England Dairy Company, High-street, Gosport, for whom Mr. C. Blagg, of Portsmouth, appeared, was summoned for selling milk adulterated with 9 per cent. of added water.—Mr. G. H. King, of Portsmouth, prosecuted, and evidence was given by Mr. C. H. Davies, inspector under the Food and Drugs Act, that on the 10th ult. he saw a man named Kayes selling milk at Ann's Hill and asked for a pint of "new milk." Analysis proved that the liquid had been adulterated with 9 per cent. of water.—For the defence, Mr. Blagg admitted that the water had been added to the milk in question, but submitted that since the man Kayes was stopped by the inspector a watch had been kept upon the milk in the dairy, for the servant had been seen on more than one occasion to help herself to some milk and fill up the deficiency with water. To the conduct of the girl, he contended, that charge was due, and on this ground he appealed for lenient treatment.—The Bench, taking this defence into consideration, inflicted a fine of 10s. and costs.

ALLEGED ADULTERATION AT LOWESTOFT.

ANALYSTS DISAGREE.

At Lowestoft Police Court, on November 4, before the Mayor (A. Adams, Esq.), A. G. Notley, H. G. Jones, and E. E. Johnson, Esqrs., Mr. P. C. R. D'Eye, milk seller, of Gisleham, answered to an adjourned summons charging him with selling milk from which fat had been abstracted, without giving notice of such abstraction, on September 25. The summons was supported by the Town Clerk (Mr. R. B. Nicholson), and defended by Mr. H. R. Everitt (Wilson and Everitt). The case had been adjourned for the attendance of Mr. Napier, the Suffolk analyst, evidence having been given last week by Mr. Sutton, the Norfolk analyst, disagreeing with the analysis of Mr. Napier.—Mr. Napier now stated that on September 25 he received a sample of milk from Mr. Kell, sanitary inspector, which he analysed, giving the certificate already put in. If that milk was analysed two or three weeks afterwards it would probably show a difference with regard to the quantity of the fat.—By Mr. Everitt: It was acknowledged that analyses varied. If the milk was analysed by half-a-dozen different analysts they would probably be all different. He could not account altogether for the wide difference between his analysis and the analysis of Mr. Sutton.—Mr. Everitt: Mr. Sutton's analysis showed 2·81 per cent. of butter fat, your analysis showed 2·55; Mr. Sutton's analysis, 8·65 non-fatty solids, yours, 9·37; Mr. Sutton's, 88·54 natural water, yours, 88·8.—Witness: The difference would be in the solids, not fat, owing to the decomposition. It was impossible to get a fair analysis at the end of three weeks.—Is it a fact that adjournments for three weeks are often made for analyses to be obtained from Somerset House?—Somerset House chemists are not always right. The question is whether Mr. Sutton analysed the whole of the sample or only a portion.—Mr. Everitt: He analysed the whole.—Witness: Did he dry the whole of the sample?—Mr. Everitt: Yes.—The Town Clerk: That he didn't say.—Witness: If the whole of the sample is dried up and ground you would get a percentage of fat, but not unless, in the case of milk which had been standing three weeks.—Mr. Everitt: Mr. Sutton stated the whole sample was dealt with, and that he found more difficulty in analysing curdled than fresh milk.—The Town Clerk: I don't know whether you are cross-examining or addressing the Bench. Is there any official standard of what is pure milk?—There is no standard; there is a limit. The Somerset House limit is 2·75 per cent. of butter fat, and that of the Public Health Analyst 3 per cent.—It is a very unsatisfactory state of affairs.—Yes, but that has nothing to do with me.—Mr. Sutton stated it was impossible to tell whether skim milk had been added or the cream abstracted? I say that 6 per cent. of fat was abstracted, which means that 6 per cent. of skim was left.—You cannot swear that? Yes, I can.—Do you say that whenever you analyse a sample you can say whether skim milk has been added or not, to a decimal point like that? That's not a decimal point. I can't say whether skim milk has been added, but whether cream has been abstracted.—You are indifferent as to the result of this case, I suppose. I want you to be fair?—I am trying to be.—Do you call 6 per cent. a large deficiency? If you take it on the basis of the Society of Public Analysts it is comparatively large; upon the other basis it is not a large proportion.—In samples sent you for analysis when prosecutions follow, is the deficiency generally thirty or forty per cent.? I don't always know when prosecutions follow. Generally it is quite 10 per cent.—Witness agreed with Mr. Sutton that taking the cows off pasture and feeding them on brewer's grains might account for the deficiency. He did not, however, believe with him that this was a sample of genuine milk, as he considered some of the cream had been abstracted. The average percentage of

fat in milk from Jerseys or shorthorns was always over 3 per cent.—Mr. Everitt quoted from the report of the Local Government Board for 1893-94, in which the yield of butter-fat from shorthorns on a particular farm was from 2.43 to 5.97, and asked witness to reconcile that with his statement that the yield was always over 3 per cent.—Mr. Napier replied that they got such a low percentage sometimes from a single cow.—Mr. Everitt: I was quoting the case of a dairy. I look upon you as an unbiassed witness, but when I pin you down, you wriggle out of it.—Witness was also referred to a recent prosecution at Beccles, in which the deficiency, according to his evidence, was 20 per cent. of fat abstracted, and that a little water had been added as well. That was, he said, his opinion, but he did not state it officially on oath.—You gave it in evidence? Yes.—The case was dismissed. It was quite a farce.—Mr. Motley: Was skim milk added or the cream abstracted? I can't tell for certain, but my opinion is that 6 per cent. of the cream was abstracted.—Before the Bench retired, Mr. Everitt said he thought he ought to be allowed to speak.—The Mayor (peremptorily): No, sir, we are going to retire.—Mr. Everitt contended it was unfair that he should not be entitled to a reply on evidence of which he had received no notice.—The Mayor: It is not in the ordinary course, but if Mr. Nicholson doesn't object.—Mr. Everitt: The Bench have taken an extraordinary course, and I only ask for what is fair.—The Mayor (indignantly): I beg to say that we have not taken an extraordinary course, and please don't insinuate it. We won't hear you; we will go and adjudicate.—Mr. Everitt: Well, if you won't hear me, I can't help it.—The Mayor then rose, remarking, "I won't hear him after that remark," and the other Magistrates also retired.—After a short absence the Magistrates returned, when the Mayor announced that there not being perfect agreement between the analysts, they had decided to dismiss the case.—Mr. Everitt applied for costs, but ultimately withdrew his application.—The Mayor suggested that in future it would be better if such a long time as three weeks should not intervene between the taking of the sample and the serving of a summons, so that a defendant might have the opportunity of having his sample analysed.—The Town Clerk explained that the delay in this case was due to the sample being received by Mr. Napier while he was on his holiday.

CHESHIRE CHEESE.

Do the people who order Cheshire cheese see that they get it? A certain number are perhaps imposed on by American stuff, others by inferior English imitations, says the *St. James's Gazette*. But as a rule we may take it that the article supplied is entitled to the name it bears. That its quality is not generally up to the

mark is equally true. Cheshire, like most other English cheeses, should be matured before it is cut; otherwise it is almost flavourless. And the commodity sold at ordinary shops is too often inferior to the tasty products from Italy and France. But this is because it has never had a chance. It is packed off to the dealers as soon as it is made, and sold by them a few days after it has been received. Neither farmer nor tradesman is willing—perhaps he is not able—to lie out of his money. So it is with wheat. It is marketed almost before it is threshed. Everything is sacrificed to the need for ready money. That is one secret of the agricultural depression.

WATER AT SPIRIT PRICE.

At Uckfield, Jesse Martin, of Blackboys Inn, Framfield, was summoned for selling gin not of sufficient strength.—He pleaded guilty.—Mr. Knight said gin was purchased by the Inspector which was certified to be 39.72 degrees under proof.—Mr. G. E. Hillman, for the defence, said defendant's wife made a mistake in breaking down the spirits, and put half-a-pint too much water. Fined £1 and 8s. costs.—At the conclusion of these cases the Chairman said the public were greatly indebted to the County Council for the steps which they were taking to carry out the Act. It was a most wholesome Act indeed, by which every man in the country, rich or poor, should have wholesome food and undiluted drink. The Bench would do what they could to assist the County Council in the matter.

ALBERT TAYLOR, innkeeper, Bawtry, was summoned at Doncaster, on Nov. 6th, for having sold adulterated whiskey on the 28th ult.—Inspector John Wilson, employed by the County Council to see to the proper carrying out of the Food and Drugs Act, deposed to obtaining a sample of the whiskey, which he forwarded to the public analyst, with the result that it was found to contain an excess of water of 18.3 parts.—Fined 5s. and costs.

At Flaxton Petty Sessions, Mary Cook, innkeeper, Flaxton, was summoned for selling whiskey which was not of the quality demanded. Thomas Newstead, inspector, said that on the 7th September he purchased a pint of whiskey at the defendant's house, paying 2s. 4d. He told her he had bought it for analysis. The analyst's report showed that the whiskey contained 15 per cent. of added water in addition to the 25 per cent. allowed by law. The defendant told him that if it was so, she supposed she would have to pay. She had no spirit tester.—Mr. K. E. T. Wilkinson, who represented the defendant, did not contest the evidence, but asked for a slight penalty because of defendant's good character. He said that she had recently had to attend both to the housework and to the customers, and the cork must

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have been left out of the bottle from which she served the inspector. She had held a licence for 24 years, and there had never been a complaint against her.—The magistrates took into consideration the defendant's good character, and fined her only 2s. 6d. and the costs.

At the Brentford Petty Sessions, before Mr. M. Sharp and six other justices, Henry Purser, a licensed victualler, of the Jolly Blacksmiths, Twickenham, appeared to answer a summons under the Food and Drugs Act, with having sold whiskey diluted with water to the extent of 40 per cent.—Mr. C. Robinson, solicitor, appeared for the defence.

Inspector Tyler stated that on October 16th he was in the defendant's house, when his assistant bought some whiskey, which he told the landlady would be submitted for analysis. He produced the analyst's certificate, which showed that it contained 51 per cent. proof spirit and 49 per cent. of water, the maximum amount under the Act being 25 per cent.—By Mr. Robinson: He did not see a notice to the effect that all spirits were diluted, but he would not say there was not one.—Do you know that it is not an offence, if the usual notice is exhibited in a conspicuous place in the bar?—Not in such a case as this. Mr. Robinson said there was an explanation he should like to make. The spirits were in a tub upstairs, and ran down a pipe into the tap in the bar. On the morning in question the defendant had been cleaning out the tub, and in putting the whiskey back to break it down to the 25 per cent. he had put the water in first. The inspector unfortunately had the first serving, with the result that he had a larger quantity of water than he should have had, as the spirit and the water had not then mixed.—Mr. Sharp: The funny thing is that these things happen just when the inspector calls.—Mr. Robinson: But anybody tasting it would have known there was too much water, and would have called the attention of the landlady.—The Chairman: Would a teetotaler know?—Mr. Robinson: Yes, sir; because it would have no effect on him. (Laughter.) What should have been done was to put the whiskey in first.—Mr. Sharp: Then, vice versa, the one served first would get all whiskey.—Mr. Robinson said he should rely on the fact that the notice had been considered a good notice. In this case the notice had been in a conspicuous place for five years.—The Chairman said the question was whether the additional 24 per cent. came under Section 8 of the 1875 Act as "fraudulently increasing the bulk." How far did Mr. Robinson think they could go over the 25 per cent. to keep within the protection of that notice.—Mr. Robinson: It is not necessary to say the amount of the mixture.—The Chairman: But two more points would have made it water diluted with Irish whiskey, and do you say that the notice is a protection of that?—Mr. Robinson: You cannot draw the line.—The Chairman: Not one part whiskey and one part water? He added that all the magistrates were against Mr. Robinson on the question as to the protection of the notice.—Mr. Robinson then proceeded to call evidence to show that there was no fraudulent intention, but only a mistake.—Henry Purser, the defendant, went into the box and corroborated the statement as to the mistake in mixing. In reply to Mr. Tyler, he said the whiskey was bought as proof spirit in July from Adam Hill, distiller and rectifier.—Mrs. Purser, the landlady, said she served the inspector. She did not call his attention to the notice. She was a stranger to the business, having only been married eight months.—A Twickenham surveyor, called for the defence, said that the notice (produced) was fixed in the bar under the clock, and could be seen from any part of the bar. He put it there before the defendant went into the house.—After consulting with the other justices, the Chairman said they were unanimously of opinion that the water was put there with the fraudulent intention of increasing

the bulk. The notice produced did not protect defendant a bit in this case. There would be a fine of £5 and costs, and the license would be endorsed. Mr. Robinson said he thought the defendant was punished enough by the fine. It was not like an offence under the Licensing Act, but a prosecution under the Food and Drugs Act. If such were the case, a publican would be worse off than an ordinary grocer fined under the same Act.—After further consultation, the Bench did not see any reason why they should alter their decision.

DISEASED MEAT.

At Aberdeen, on November 9, Hugh Walker, fletcher, Gardener's-lane, and John Brown, cattle dealer, Hardgate, were charged with having, on October 17, in the slaughter-house at 2, Hutcheon-street, had in their possession a carcase of diseased beef, which was intended by them to be used for human food.—They both pleaded not guilty.—Mr. J. M. I. Scott appeared for Brown, and Mr. G. M. Aitken for Walker.—Mr. Kenneth Cameron stated that on the afternoon in question he visited the slaughter-house in Hutcheon-street. In one of the chance stalls he found the carcase of an animal which was dressed and ready to be used as human food. On inspection he discovered that it was diseased.—Dr. Matthew Hay also spoke as to the diseased condition of the animal.—Mr. Mackenzie, assistant cattle salesman, who gave evidence regarding the sale of the animal, stated that it seemed to him to have been in a healthy condition.—Mr. Aitken, on behalf of Walker, stated that he was merely a servant in the employment of Brown, and therefore could not be held responsible in the matter.—Mr. Scott said that Brown did not see the carcase, and consequently it could not be held that he wilfully exposed it for human food. When it came to his knowledge that it was diseased, he immediately wrote a letter to the sanitary inspector asking him to call on the following morning.

The magistrates found the charge against Brown proved, and imposed a fine of 60s., with 23s. 6d. expenses, the alternative being ten days' imprisonment. The charge against Walker was found not proven.

DAVID KING, a butcher, residing at 220, Dalmarnock-road, was fined £5, on Nov. 11, at Glasgow, by Bailie Robert Anderson, for exposing for sale 146lbs., or thereby, of beef which was unfit for human consumption. Accused pleaded guilty, the charge setting forth that, in the shop at 24, Thompson's-lane, he had exposed in the front window 15lbs., on the front counter 5lbs., and on the back counter 126lbs.—The diseased meat was condemned and seized by the authorities.

At Clerkenwell, on Nov. 12, James Saintly, butcher, of Rook-lane, Cottenham, Cambridgeshire, was summoned by the Holborn District Board of Works for depositing on October 14, at the shop of Arthur Stearn, 109, Charterhouse-street, Smithfield, four pieces of meat that were unsound and unfit for human consumption.—Mr. Mathew Hale prosecuted, and said the animal—a cow—of which the meat was a portion, fell down dead after an illness of eight weeks. The owner of the cow received £9 10s. from the agricultural insurance club as compensation, and afterwards the committee of the club gave the animal to a man named Smith, who sold it to the defendant for 12s.—George Billing, sanitary inspector, proved seizing the meat after it was deposited at Mr. Stearn's shop. From the condition of the meat it was obvious that the animal had died a natural death. In the course of his inquiries the witness went to Cottenham, Cambridgeshire, and found the defendant in a shed on a small piece of land

belonging to him. Sainly was cooking some meat in a pan, and when the officer spoke to him about the pieces he sent to Mr. Stearn's premises the defendant replied: "I am eating some of the same beast, but I sent it to London as cat's meat." The defendant added that he had sent meat to London before, and Mr. Stearn told him he might send him inferior meat. Had he known that the consignment in question would have caused trouble, he would have sent it to a dealer in horseflesh. The pieces of meat sent by the defendant to Mr. Stearn's shop were packed as good meat, and the special rate of carriage for good meat was paid to the railway company. Mr. Arthur Stearn was called, and admitted receiving the meat. He also admitted receiving from the defendant a letter in which Sainly wrote, "I send this as cat's-meat; make the best of it." Mr. Horace Smith: What did you propose to do when you received the letter.—The Witness: I was away from town when that letter arrived. If I had seen the beef I should not have sold it. Mr. Horace Smith: Here is a man sending up bad meat packed as good meat, to your shop. He says it is cat's-meat, but asks you to make the best of it. I hope you will never do anything of the sort. If you do I shall certainly consider it my duty to see that you are charged with conspiracy. You have read in the newspapers about the case of Link, I suppose? —The Witness: Yes, but I can't help people writing to me.—In defence Sainly pleaded that he had no money, and that he sent the meat to London for cat's food.—Mr. Horace Smith: You did nothing of the sort, and you must go to gaol for two months.—Mr. Thomas, of 60, Chapel-street, Clerkenwell, was summoned, at the instance of the Clerkenwell Vestry, for having in his possession, for the purpose of sale, 19 pieces of pork and one rabbit which were unsound and unfit for the food of man.—Mr. Sandeman prosecuted, and Mr. W. Ricketts, jun., appeared for the defendant. The pork and rabbit were seized by Sanitary-inspector Bartlett, who pronounced them putrid. Some of the pork had disinfectant upon it.—Mr. Ricketts said Thomas was only the manager of the shop, and when the rabbit and pork were seized the latter were being sorted by the defendant, who had no intention of selling it. Mr. Horace Smith ordered Thomas to pay a fine of £20, in default one month's imprisonment.

At South Shields on November 5, John Strathearn, belonging to Pitt-street, Newcastle, was summoned for depositing for sale in the South Shields Market-place, ten rabbits, which were unwholesome and unfit for human food.—William Edward Arnsby, inspector of nuisances, said he examined the rabbits, and found them in a decomposed condition, and smelling very bad. Witness asked the prices, and was told from 9d. to 11d. each.—Marshall J. Pollock, inspector under the Food and Drugs Act, and Dr. Dalziel corroborated.—Defendant, in answer to the charge, said he had gone to Shields Market for the last three years, and sold 60 or 80 rabbits per week. He was sure that they were fresh when put into the hamper at Newcastle, but October 23 was a very warm day.—Defendant was fined £5 and costs.

LARD.

At Hastings, on Nov. 6, Arthur Morris, of Devonshire-road, Bexhill, was summoned under the Food and Drugs Act for selling adulterated lard.—Mr. Knight appeared for the prosecution, and Mr. Herbert Mason (of London) appeared for the defence.—Inspector Lathom spoke to calling at the defendant's shop and asked for three-quarters of a pound of lard. He sent a part of what he was supplied with for analysis, and the report he had since received showed it to be adulterated with 25 per cent. of beef fat.—

Mr. Mason spoke of the importance of the case being strongly contested, as the lard was a widely sold brand from America.—Samual Allison Woodhead, of Uckfield, the County Council Analyst and lecturer to the College of Agriculture, proved receiving the sample of lard from Mr. Lathom. He gave the results of his analysis, and described the three different tests which he applied. There was not less than 25 per cent. of beef fat crystals present.—For the defence, Dr. Rideal, Doctor of Science of London University, and a Fellow of the London University, Fellow of the Institute of Chemistry, Member of the Council of Public Analysts, and Public Analyst to the Lewisham District Board of Works, said he had made a special study of analysis of fats and oils. He found the sample in question to be a genuine hard lard with no water. He would describe it as containing 100 per cent. of lard.—Mr. Knight suggested that the two samples of the lard should be forwarded to the analyst at Somerset House.—The Bench consulted, and granted the application of Mr. Knight, the case being adjourned for a month.

OLIVE OIL.

DAVID WILLIAMS, grocer, Mill-street, Pontypridd, appeared before the Bench on November 10 charged with an offence under the Foods and Drugs Act. Superintendent Coles stated that he visited the defendant's shop on the 12th of last month. His wife and assistant were there, and upon asking if they sold olive oil he had a reply in the affirmative. He then asked for half-a-pint, and he was supplied with a flask containing that measure. He paid 6d. for it, and stated that he had purchased it for the purpose of analysis. Mrs. Williams stated that she did not want it divided. The public analyst had certified that the sample sent him contained 100 per cent. of cotton seed oil. Olive oil, explained the superintendent, cost 5s. 6d. per gallon and cotton seed oil 1s. 10d. per gallon. The defendant stated that he bought the flask of oil in December last, but he had used it for stable purposes. He sold it occasionally, but never as olive oil, and he only charged 4½d for the flask. Had he been in the shop at the time the superintendent called it would not have been sold as olive oil, and the person in the shop—who was employed as his haulier—should have called him to serve. The costs amounted to £1 10s, and the defendant was fined £2, including costs.—The Defendant: What's the alternative?—Magistrates' Clerk: Distress.

COTTON SEED MEAL.

PROF. W. F. MASSEY, of the North Carolina Experiment Station, has some very decided views in regard to the feeding of cotton seed meal and hulls to cattle. He has given the subject considerable attention, and recently exposed the fallacy of an article appearing in a Mississippi Agricultural paper called the *Farm Gazette*. Among other things Prof. Massey said: In all the experiments made at this station, and they have been many, I have never seen an animal that was fattened after a manner on cotton seed hulls and meal, that would not have died had the feeding been continued a little longer. So I have not hesitated to give it as opinion that cotton seed meal is a dangerous food as it is being fed in the South. If the editor of the *Gazette* differs from me in this opinion, he has a perfect right to differ, but he has no right to assume that all wisdom resides about the office of the *Gazette*. We have been, during the past summer, studying this matter whilst attending our summer institutes, and find that the same experience has followed the feeding by others. One large dairyman told me that he had been compelled to stop the use of cotton seed meal entirely, and that a neighbour dairyman, who was an enthusiastic feeder of

meal and hulls was continually loosing cows and could not understand that the meal had anything to do with it. Beef made from feeding the meal and hulls is not fit for food, nor can gilt-edged butter be made with it. The *Gazette* man is one of those touchy people who jump to the conclusion that it is a crime against the South to object to the feeding of cotton seed meal. I expect that I am as sincere a lover of the South, and have worked as hard for her best binterests as the *Gazette* man. There is use for all the cotton seed meal made in the South as a fertilizer, and for this purpose it is worth more than it usually sells for. But the idea that cattle can be profitably kept on a diet of cotton seed meal and hulls, is one of the things in the way of the production of good beef and butter in the South, and in the way of rational farming and forage growing. Fed in small quantities to balance a ration of first-class carbonaceous food, the meal may have some advantage. But it is seldom fed in this way in the South, and is today killing more animals than disease. I would suggest to the apparently young men who control the *Southern Farm Gazette*, that sneering answers no arguments, and that a gentleman should always be a gentleman, in print as well as elsewhere.

BUTCHERS AND TUBERCULOSIS.

THE *Field* says:—The confiscation by the authorities of tuberculous meat found in the meat market or retail shop is a long standing grievance with butchers; and it must be admitted the ground of their complaint is of a reasonable and substantial character. The meat trader is not, for various reasons, the object of much mercy either from producers or consumers, but whatever his claims in this respect may be, he is at least entitled to common justice. In regard to the matter complained of, it may very fairly be urged on his behalf that this he does not receive. As the law stands at present, the butcher or meat salesman in whose possession the unwholesome meat is found alone suffers by the confiscation of the diseased article. In ordinary cases this would probably be fair enough, but applied to tuberculous meat this simple method not unfrequently leads to a misdirection of justice and the punishment of the innocent. As is generally recognised, animals in which tuberculosis is pretty far advanced may present a perfectly healthy appearance outwardly. The butcher buys animals of this deceptive type daily at full commercial value as if wholesome, and the first intimation he may receive of the unfitness of the carcase for human food may be the demand of the inspector for its destruction. It will readily be conceded that in cases of this description the unfortunate and unsuspecting tradesman is subjected to unfair treatment, and that his claims to be compensated for meat so seized are not only justifiable but reasonable. Butchers have for years past threatened to take steps to have this hardship remedied, and the subject was again discussed at the recent conference of the National Federation of Butchers and Meat Traders' Associations held at Bradford. It was decided to defer any active measure until the report of the Tuberculosis Commission is published, but notice was given that, should the impending report fail to deal satisfactorily with the matter, the executive will consider the advisability of the buyer demanding a protective guarantee from the seller. Left to his own resources this is the only form of remedy the butcher can devise, but it is to be hoped the Government will render such action unnecessary by coming to the rescue with some properly constituted scheme whereby the innocent possessor of tuberculous meat may be compensated out of the national purse.

The *Morning Post* says:—Tuberculosis in cattle has long been a fruitful source of complaint by and loss to the butcher. As is but right, the law requires that the carcasses of cattle which have suffered from this serious

and transmittable disease shall be condemned as unfit for human food, and forthwith destroyed. This is so far very good; but while confiscating the property of the butcher, Parliament fails to provide any compensation to the unfortunate trader who unintentionally and perhaps unknowingly finds himself the possessor of diseased meat. As is well known, an animal may be very severely affected with tuberculosis without betraying outward indications, visible to the unskilled eye of its inward condition. It therefore frequently happens that butchers buy diseased cattle believing them to be absolutely sound, and having paid for them as such it need not occasion surprise if, when the carcasses are found to be diseased and consequently destroyed in the interests of the public, but to the sole direct loss of the butcher, the latter offers his protestation. In such cases the meat trader suffers heavily and unjustly, and his claim that the public should be made to pay for the protective measures administered in its behalf does not seem in any way unreasonable, provided of course the innocence of the butcher can be established. At the recent conference of the National Federation of Butchers' and Meat Traders' Associations this question among others was discussed, and a resolution was adopted protesting against the confiscation of native animals on account of tuberculosis as encouraging butchers to give preference to foreign animals. Pending the investigations of the Tuberculosis Committee energetic action was discouraged, but should the report of that body be deemed unsatisfactory to the trade the executive will consider the advisability of the buyer demanding a guarantee from the seller.

THE SALE OF MARGARINE.

IMPORTANT POINT.

MR. RICKETTS attended before Mr. Cluer, at North London, on Nov. 10th, to prosecute on behalf of the Butter Association, of Monument-buildings, E.C., a number of Hackney provision merchants for offences under the Food and Drugs and the Margarine Acts. The chief point of interest arose in the case of Charles Moody, of Well-street, Hackney, who was summoned for non-compliance with the section of the Margarine Act, which provides that each piece of margarine sold shall be placed in a wrapper on which is printed in letters not less than a quarter of an inch square the word "Margarine." In the present instance the word margarine was printed in the middle of a circle in type of the requisite size, but within this circle also was the defendant's name and address, followed by "Irish eggs. Brittany, Devon and Dorset butters."—Mr. Ricketts said that equal prominence was given to these butters as to the margarine, and people might as well suppose that they had bought butter as margarine.—Mr. Ford, who defended, said that there was nothing in the Act which said that other words should not be placed on the wrapper.—Mr. Cluer said that was so, and dismissed the summons with £1 1s. costs.—On another summons, however, the defendant was fined 10s. with £1 1s. costs, for exposing margarine for sale without the necessary ticket.—William Addis, of Well-street, for selling butter with 68 per cent. of foreign fat, was fined 40s., with £2 2s. costs.—For a similar offence, Thomas Davies, of Well-street, was fined £5, with £1 1s. costs.—John Owen, of Well-street, for selling margarine without a label, was fined 20s., with 21s. costs.

At Birmingham, on November 11, Minnie Cartlidge, 266, Coventry-road, was fined 40s. and costs for an infringement of the Margarine Act.—Inspector Jones sent a girl into defendant's shop to purchase a quarter pound of butter. This was supplied, wrapped in plain paper. The butter was sent to the public analyst, who certified that it contained 85 per cent. of foreign fat.

At Worship-street, on November 10, Robert Loftus,

of 100, Hoxton-street, provision dealer, was summoned, before Mr. Dickinson, for selling as butter an article which was margarine.—Mr. Margetts said his client would plead Guilty, but offered in extenuation the fact that the defendant had only opened the shop a fortnight, and that the business was a large one. In the press of a shop full of customers one of the assistants, Elizabeth Jones, served margarine in lieu of butter to the sanitary inspector.—The sanitary inspector for the parish of Shoreditch admitted, in reply to a question, that the shop was full, and further that 14 ounces of the article was served, though only half-a-pound was asked for.—Mr. Margetts thought the latter fact was proof that the sale was made in error during press of business, and called the assistant, a young woman named Jones. It was suggested, however, that it was a practice to give over-weight to attract custom to a newly-opened shop.—Mr. Dickinson elicited from the assistant that she had been told to do so.—Mr. Dickinson thought that was the secret of this case—the sprat to catch the whale of custom. He fined defendant 40s. and costs.

ADULTERATION IN BUCKINGHAMSHIRE.

At the meeting of the Bucks County Council, at Aylesbury, on Thursday, the question of food adulteration was discussed, and the following resolution was adopted: "That in the opinion of this Council the Sale of Food and Drugs Bill introduced by the Government last session is entirely inadequate; that no measure will be satisfactory which fails to give full effect to the recommendations of the Select Committee on Food Products Adulteration, endorsed as they have since been by the Royal Commission on Agriculture; and that a measure embodying these recommendations should be introduced and passed into law early in the coming session of Parliament."

ADULTERATION IN EDINBURGH.

A REPORT by the public analyst of the city of Edinburgh states that during the quarter just ended thirty-six samples have been received for analysis. The samples of flour, sugar, barley, and mustard were all found to be genuine. The last-named did, indeed, contain some starch, but the amount of this which was present was so small as to be almost insignificant. The vinegar had a very poor flavour, and was altogether of a very suspicious character; but the results of the analysis, however, did not warrant him in certifying that it had been adulterated. The samples of cream of tartar both contained a small amount of metallic impurity. In other respects, however, they were of good quality. Of the samples of butter, one was genuine, and one contained not less than 90 per cent. of foreign greasy matter.

THE NUTRITIVE VALUE OF BROTHS AND BEEF TEAS

THE nutritive value of broths and beef teas has often been questioned by dietetic specialists, and now we notice that Professor Bondgarten, after detailing in a paper read before the Medico-Chirurgical Society a series of experiments, in order to test the nutritive value of beef tea and broth, said (after the analysis): "I look at the meat that has been spoiled in making the tea; all its fibre is left, the bulk of the solids of the meat is myosin. It is this which we intend to pay for when we buy butcher's meat; it is this we mean to feed upon when we eat a beefsteak. After the preparation of the beef tea, it is thrown away, a little worse for its treatment, a little tough, insipid, deprived of its salts, yet containing nearly all the strength of the meat. The tea has removed from it no nutritious substance excepting only the mineral salt. How often is the patient starved on beef tea, when he is supposed to be well fed; how often he is supplied with the luxury of beef tea when the necessities of life are carefully withheld. Let

the patient have nourishment, and, if it will do him good, let him also have beef tea, condiments, and wine."

A FUTURE BEVERAGE.

COLONEL WARING, the sanitary engineer who has been in charge of New York streets for two years with universal approval, thinks that purified sewage may yet become a popular drink—at least in great cities for which no other supply is feasible. It sounds unsavoury, but is really not insalubrious, according to Colonel Waring's experiments. By forcing compressed air through foul water its impurities are oxydised—that is, burnt out, and chemically pure water obtained. In the presence of city officials Colonel Waring has performed this experiment upon common sewage water, and both they and he pronounced it when defecated both palatable and pure. Just as the air is purified by natural means and used over again, so, he says, it must eventually be with water. At least, that is what the increasing multitudes in and around New York, he thinks, will have to come to.

A 80FT PAVEMENT TO FALL ON.

AN alderman of Port Angelos not long since was greatly exercised over a paving problem, and vigorously championed wood in a speech, closing it, says *The Surveyor*, as follows: "Gentlemen, I consider it our bounden duty to degrade and pave these streets. By putting our heads together we can, at least, construct a wooden pavement. By so doing our posteriors will for ever bless us."

CATTLE-SHIPS.

A PAPER on "The Present Conditions of the Cattle Trade" will be read by Isabel M. Greg (author of "Cattle-Ships and our Meat Supply"), before the Humane Diet Department of the Humanitarian League, on Friday, November 26, at 8 p.m., in the Arbitration Room, 63, Chancery Lane. The Chair will be taken by W. S. Godfrey. Admission free.

VENTILATION OF SEWERS.

IN a letter pointing out that "the health of London is threatened by the insanitary state of its main drainage, caused by improper and insufficient methods of ventilation," Mr. J. Ratchiffe Cousins, of 4, Plowden-buildings, Temple, mentions that the Council propose to try and remedy the existing state of affairs by erecting ventilating tubes at different spots along the roads. "Now I understand," he continues, "that it is an accepted fact among nearly all prominent sanitary engineers that these hideous ventilating tubes are worse than useless, for they have been demonstrated to be considerably less efficient ventilators than street gratings, and when substituted for such there is a consequential accumulation of sewer gas in the mains. There are certain apparent facts which ought to guide us to a remedy. It is evident (1) that ventilation unassisted is no remedy; (2) that the present system of ventilation is obnoxious. The most rational method seems to be to prevent the formation of sewer gas rather than to attempt to assist its escape only. This can be done only by the aid of chemicals. A chemical system has been tried with satisfactory results at Henley, Sutton, and other places; and, indeed, for a short time was tried on the Thames Embankment. At all these places I learn it was a great success. If this be so, why has not some such system been adopted at all the spots where the evil exists? If it be suggested that it has not been a success, let us hear what the sanitary officers of the London County Council, Sutton, and Henley have to say as to the result of the experiments made under their supervision before allowing these antiquated and useless ventilating gas tubes to be erected all over the metropolis, which, I am convinced, would leave the sewer purification problem still unsolved."

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Food and Sanitation.

SATURDAY, NOVEMBER 27TH, 1897.

THE DEFECTS OF EXISTING INCANDESCENT MANTLES.

A WARNING TO MUNICIPALITIES.

WE some time ago had occasion to warn our readers against the designs of certain persons concerned with gulling the public with the belief that there is any future for incandescent mantles for street lighting or for lamps, and in large centres, where they have been tried for street lighting, they have been found to be a nuisance on account of their fragile character. However many the blandishments and specious arguments for their use they are scientifically untenable, for the fact remains that with the slightest movement or concussion caused by wind or

weather variations, the mantle crumbles away. The persistent efforts to induce municipalities to make contracts or give these mantles a trial were inexplicable until recently. It has all been a big financial game devised to induce the public to pay an enormous sum for an invention which is scientifically obsolete, and has already been rendered worthless in the near future by recent scientific discoveries.

The anxiety to get the public to part with their money has its rise, doubtless, in the knowledge possessed by the financiers interested, that science, never still, has produced a mantle having none of the sorry and irritating defects of the existing mantles. We have seen, and personally tested, this latest scientific advance. It can be folded up or kicked about; it can be placed upon a lamp and carried from place to place without crumbling away. It has a far greater incandescent power, four times the durability, and can be sold at a third of the cost of existing mantles, and then yield a handsome profit. What future, then, has the old-fashioned mantle? If any of our readers wish to know of the latest scientific development in incandescent lighting, they can learn of it, and have opportunities to see it, by writing to the editor of the Journal. A company is about to be formed to work this important discovery with the modest capital of £100,000, which will provide ample working capital, and the company has the advantage of the financial support of the largest distributors of incandescent mantles in the United Kingdom. Municipal bodies should therefore beware.

WHAT SUGAR DO WE EAT?

CANE v. BEET.

(BY OUR SPECIAL COMMISSIONER.)

As all the world knows, beet-sugar, grown and to a great extent made in Germany, France, Belgium, and elsewhere, has displaced the cane-sugar that we formerly used, to the great injury and impending ruin of our West Indian possessions. The relative proportions of the two sugars imported into the United Kingdom have changed during the last fifteen years to the following extent:

| | Cane. | Beet. |
|----------|--------------|--------------|
| 1882 ... | 65 per cent. | 35 per cent. |
| 1896 ... | 25 " | 75 " |

If we go back further the difference is still more marked; but the foregoing figures prepared by the Board of Trade will suffice. And the movement is still proceeding so rapidly that the complete disappearance of cane-sugar seems highly probable. My object here is not to discuss the causes or the general bearing of the change, but to inquire into a particular aspect of it to which no attention has hitherto been directed.

THE CONSUMER'S POINT OF VIEW.

What part does the consumer play in the matter? How far has the substitution of beet for cane been effected with his knowledge and consent? What is his attitude—or perhaps I should say her attitude, as sugar falls more within the province of women so far as domestic consumption is concerned? What does the housewife think? Has she any choice? And if so, is she allowed to exercise it? As the result of diligent inquiries among consumers of different classes and among various retailers in the East and West-end, I am able to give a fairly definite answer, which may surprise some readers.

In the first place, the average purchaser rarely knows what she is buying. This applies to pretty nearly everything. When Englishwomen go shopping they place themselves almost entirely at the mercy of the shopkeeper. They do not know the quality or the origin of the goods they buy; and when they take the trouble to ask, which is seldom, the shopkeeper—who is often equally ignorant—

may tell the truth or not as he pleases. What they care about is not quality or origin, but cheapness and appearance; and of the two, the upper classes are more taken by the cheap, the lower by the pretty. If they care about any other consideration, it is the name attached to a thing, either because it has a traditional value or because it is much advertised. All this applies generally, and to sugar among other things. It explains the gradual decline of the cane and the triumph of the beetroot. For I find in all classes a floating preference for cane somewhere at the back of the mind. If you ask the first housewife you meet, "Do you use cane sugar or beet?" she will be taken aback. Ten to one she does not know. She will say that she "always gets the best," and, on further pressing, that she believes it to be cane; but whether it is or not she cannot say; she will "ask her grocer." There are exceptions, but that is the average state of mind. If you go further and put it this way: "Suppose there were two heaps of sugar, one labelled 'Cane' and the other 'Beet,' which would you choose?" the answer invariably is "Oh, cane, of course." And, as a matter of fact, cane is commonly spoken of in the retail trade as "real" or "pure" sugar, and those who sell it label it "pure cane" sugar, whereas the word "beet" is never seen or heard. This certainly indicates the existence of a preference or at least a belief on the shopman's part that one exists. Yet people buy about four pounds of beet to one of cane.

WHAT THEY BUY IN THE WEST-END.

The sugars used for domestic consumption are to all intents and purposes of two kinds—"loaf," for tea and coffee, etc., and "moist" or "crystallised," for cooking. There are other kinds used for special purposes, but these are the staple. The upper and middle classes use both, the lower only the moist. Of loaf sugars three kinds are generally sold or kept for sale:—(1) Pure cane, of which the present price is 2½d. a lb.; (2) best loaf at 2d., and (3) second quality loaf at 1½d. The two latter are made from beetroot, and a constantly increasing proportion of them is not even refined in this country but comes direct from abroad. But these are the sugars which are bought in the West-end in a proportion of at least 4 or 5 to 1, as compared with the "pure cane." People come and ask for the "best loaf sugar," and this is what is offered them. A certain number of customers ask for, and insist upon having, cane sugar, and it is for their benefit that it is kept; but they are quite exceptional, and probably not more numerous than the people who insist upon having China tea. The others do not ask or care. They may be told that there is another quality a halfpenny dearer; but if this is the "best loaf," and at the same time the cheaper, why, so much the better. Theirs not to reason why, theirs but to go and buy. With regard to "moist" or "crystallised," this is also made from both cane and beet. The former is called "Demerara," or, in the slang abbreviation used by the trade, "Dem."; the latter "yellow crystals." Now, the upper and middle classes buy almost exclusively Demerara, and this probably accounts for nine-tenths of the sale still retained by West Indian sugar. When they go to buy moist sugar they ask for Demerara, and the shopman is liable to penalties under the Food and Drugs Acts if he gives them anything else. It does not necessarily come from Demerara. The word is understood to be synonymous with West Indies. It may come from Trinidad or Barbadoes, and is sometimes labelled as such. Every lady who knows anything about her own household will tell you that she always buys the best Demerara. She has got the name in her head, and that is the saving of the thing, together with the Food and Drugs Acts. The price is 2d., or perhaps 1½d. There is another kind of West Indian moist sugar, called "brown moist," or "soft moist," or "Barbadoes." It is used for special purposes, and can take care of itself, as it possesses a distinctive smell and taste, which cannot be imitated by beetroot. It is the most sugary of all sugars.—*St. James's Gazette.*

OYSTERS AND TYPHOID FEVER.

DR. GEORGE BUCHANAN is inquiring, on behalf of the Local Government Board, into a somewhat widely-distributed occurrence of typhoid fever in Essex which has been connected with the consumption of foreign oysters laid near an outfall sewer at the entrance to Brightlingsea Creek, in the River Colne. As far as can be ascertained twenty different cases of typhoid have been distinctly traced to the same cause, and as some of them occurred at Clacton-on-Sea before the termination of the summer holiday season, it is impossible to say how many more occasional visitors from London may have been exposed to danger by eating oysters taken from the same bed. The owners of oyster beds in many places on the coast where there is no sewage pollution are exceedingly anxious that legislation should be passed which would have the effect of prohibiting the sale of oysters laid near sewage outfalls, and it is understood that petitions to this effect will be presented to Parliament during the coming Session.

FOOD ANALYSIS IN LONDON.

IN a letter to the editor of *The Standard* a Mr. Dennis says:

"I notice in your evening issue of the 16th inst., you quote from the Quarterly Report of the Analyst to the Mile-end Vestry, from which it appears that during the thirteen weeks dealt with, seventy-three samples taken by the inspectors were submitted to analysis by him, with the result that seven—or nearly ten per cent.—were found to be adulterated. You further say that 'it may be doubted whether a better record could be obtained from samples taken in the West End.'"

"To settle all doubts on this point, I beg to hand you an extract from Report of Medical Officer of Health for St. Marylebone (Dr. A. Wynter Blyth), from which it will be seen that during the thirteen weeks ending 30th September last, one hundred and fifty-one samples (including twenty of butter and sixty of milk) were submitted to the test of analysis, with the gratifying result that (to quote from the Report): 'In not a single case was there found any adulteration!' showing a state of things of which St. Marylebone is justly proud."

This charming illustration of the gentle art of puffery will interest our readers.

PACKET TEA SWINDLES.

THE *Daily Mail* has been revealing some of the tricks of the "short weight business," and a correspondent, who evidently knows something, writes that "few people have any idea of the colossal profits made by the simple process of docking an honest pound of its last ounce. This is done to an incredible extent, and, so far from shocking anybody, it seems to be accepted as one of the conditions of enterprise in business."

"Here is a little computation. Certain great dealers and companies are very frank with the public as to the amount of their turnover, so we have their own figures to go upon. Take the packet-tea business, for example. Take a firm that turns over 3,000 chests per week. Let them save a half-ounce in wrappings on every packeted pound of tea, say at 1d. the ounce, and you have £625 per week, which in the year mounts to the handsome balance of £32,500. Amazing as this is, it is an over-moderate estimate, both in quantity and price. I have lately been buying packet teas bearing names of wide celebrity, which weighed on the scale under fifteen ounces to the pound, so that at a stroke our amazing total flies above £60,000 per annum, all made out of—nothing."

"At this rate, success is assured to the unscrupulous monopolist as surely as ruin is assured to the few remaining adherents of old-fashioned uprightness in business."

"Packet your goods, dock a half to a whole ounce in the pound for wrappings, do it on a big enough scale, and you may advertise like the princes of commerce, without ever touching your legitimate profits."

Those who know some of the tea swindling M.P.'s will now understand how it is done.

AMERICAN HAMS AND SCOTCH HAMS.

At the South-West London Police-court on Nov. 16th, Mr. Marsham was engaged some time in hearing summonses, issued at the instance of the Bacon Curers' Association of Great Britain and Ireland against retail provision dealers, for selling American hams as Scotch hams.

In the first case Frost and Co., provision dealers, of 303, Lavender-hill, S.W., were summoned under the Merchandise Marks Act for selling an American ham as Scotch.

Mr. B. Weekes prosecuted for the association, and Mr. Ricketts defended.

Mr. Moore, an inspector in the service of the association, stated that on September 1st he went into Frost and Co.'s branch shop at 14, Northcote-road, and asked for "a nice Scotch ham." The shop manager, Horace Nice, gave him a ham which was branded, "W. M. and Co.," that is Walter Mitchell and Co., well-known curers, of Ayr. The witness asked Nice if he was sure that it was a Scotch ham, and the shopman said he was told to sell it as Scotch. As a matter of fact it was an American ham, merely trimmed and smoked in Scotland. He paid 8½ a pound for it.

Mr. Ricketts: Can you tell me a shop in England where you can buy Scotch ham?

The Witness: No, I couldn't. I have seen Scotch ham in Scotland.

Mr. Ricketts: Because it was in Scotland. (Laughter.)

Mr. Marsham: I have bought Dumfries hams in London.

Mr. Ricketts: I am told that Scotch hams are very fishy.

Mr. Marsham: I found them very good.—(Laughter.)

The Witness: I was not deceived about the ham. I saw at a glance that it was an American ham smoked and trimmed in this country.

Mr. Ricketts: What do you mean by this country?

The Witness: England and Scotland, and (with emphasis) Ireland, thank goodness.—(Loud laughter.)

Mr. Ricketts: Isn't smoking part of curing a ham.

The Witness: Oh, no, smoking is merely a fancy—some like it unsmoked, some smoked. In America they use borax to preserve the ham.

Mr. Ricketts, in defence, urged that the defendants had been guilty of no imposition. There was no such article on the English market as a Scotch ham, they got this particular ham with others from a well-known Scotch firm of curers. Such hams as Yorkshire, Cumberland, Wiltshire, and Derry were well-known, but not such an article as Scotch ham.

Mr. Marsham thought that while he acquitted the defendants of acting wilfully in the matter, he must convict them of a distinct breach of the Act. He fined them £5; and three guineas costs, and Nice, the shopman, 20s. and 2s. costs.

In the next case the defendants were A. J. Palmer and Co., of High Street, Clapham.

Mr. Clarke, who defended, said he had nothing to add to the defence set up by Mr. Ricketts in the last case.

Mr. Weekes urged that this was a particularly gross case, inasmuch as the defendants had a regular list in which Scotch hams were priced at 8½d. a pound. Moreover, when the inspector asked for a ham, the shopman—Charles Bowden—said, "What kind? English, Irish, or Scotch?" It was very essential that the English and Irish bacon industry should be protected.

Mr. Marsham agreed that the case was a bad one, and fined the company £10 and three guineas costs, and Bowden, the shopman, 20s. and 2s. costs.

ADULTERATION IN PORTSMOUTH.

THE Public Analyst, Mr. J. Moore Murray, F.C.S., reports that "During the year 1896, 167 samples of food and drugs were analysed, of which number 157 were taken by your Inspectors, and 10 submitted by private individuals.

"Taking the population of Portsmouth (in 1896) as 178,639, the number of samples of all kinds taken in the year is equivalent to one for every 1,063 persons.

"Of the total number of samples, 33, or 19·76 per cent. were found adulterated. The percentage of adulterated articles taken by the Inspectors was 17·85, and the percentage of articles adulterated submitted by private individuals was 50·0.

"From the returns published by the Local Government Board, it appears that of the 43,962 samples analysed in 1895, 43,795 were obtained by the officers of local authorities, of which 4,093 or 9·3 per cent. were found adulterated; and only 167 were taken by private purchasers, and of these as many as 60, or 35·9 per cent. were condemned. From these facts it may be concluded that the officers of the local authorities become known to the vendors of adulterated articles, who are thus prepared to supply them with genuine samples, whilst they sell adulterated articles to an indifferent public. The fixed charge for the analysis of private samples is so small (2s. 6d.) that it is difficult to understand why the public refuse the opportunity of protecting themselves from unscrupulous tradesmen.

"The following is a list of samples analysed: Milk, 84; butter, 18; coffee, 14; pepper, 12; arrow-root, 2; vinegar, 7; whiskey, 18; rum, 3; gin, 1; sal volatile, 6; hop ale, 1; cordial, 1.

"During the year I have also analysed for the Police Authorities a sample of tea and a white powder, which were suspected of containing poison; and during the regretted illness of the Medical Officer of Health, I have made the monthly analysis of water supplied to the town.

"MILK.—The samples of milk analysed numbered 84, of which 20 or 23·8 per cent. were adulterated. The returns of the Local Government Board show that in 1895, of the samples of milk analysed throughout the country 11·1 per cent. were adulterated. The seven samples of milk returned as 'inferior' were all under the standard suggested by the witnesses examined by the Royal Commission on food and drugs.

"The 57 samples of milk reported as of genuine composition were all of very good quality.

"It is still the practice of milk sellers to add preservatives to milk, but in the genuine samples analysed few contained any preservatives. Unless there is an excess of preservatives added, the samples are not regarded as adulterated, as it is a question upon which medical experts are not agreed as to whether such preservatives as boric acid are harmful.

"BUTTER.—Of the 18 samples of butter analysed 2 or 11·1 per cent. were found adulterated. The percentage of samples, taken throughout the country, found adulterated, in 1895, was 8·2. Most of the samples analysed contained boric acid; but the Local Government Board does not advise such samples to be returned as adulterated.

"COFFEE.—Only one sample of coffee or 7·1 per cent. of the number analysed, was found to be adulterated. The other samples were of very good quality.

"VINEGAR.—Three out of seven, or 42·8 per cent. of the samples of vinegar analysed, were found to be adulterated, and most of the other samples were of very poor quality.

"SPIRITS.—22·7 per cent. of the samples of spirits analysed were deficient in strength, and therefore returned as adulterated. The per cent. found adulterated in the whole of the country in 1895 was 16·5.

"PROSECUTIONS.—Were instituted in 13 cases, fines being imposed in 8 cases.

"FINES.—From the above table it will be seen that fines amounting to £11 9s. 6d. were ordered to be paid, and in addition costs amounting to £2 19s. 0d.

"It will be also seen that prosecutions were not insti-

tuted in cases where cards were exhibited in the bar in which the spirits were purchased, and when labels stating the strength of the spirit supplied were fixed to the bottles. I am of opinion that such a defence would not be valid, having regard to the fact that the constitution of whiskey, brandy, rum and gin is defined by the Amendment Act of 1879, as far as strength is concerned.

"The Inspector has no control over the charge made for the sample, and does not pay for it until he has received it. If such a defence is valid it will defeat the proper working of the Act, and to prevent this, I think, in cases which are dismissed on account of the low charge for the sample, appeals should be instituted.

"In cases where, for various reasons, it is not deemed advisable to institute proceedings, I would suggest that cautionary letters be addressed by the Town Clerk to the vendors of the adulterated articles. At the same time, this action must not be taken to mean that the Council will refrain from prosecuting in all future cases, which are similar as regards nature and extent of adulteration.

"I would remind you that I commenced my duties in August, since which time I have analysed 118 samples, of which 23 or 19·4 per cent. were found to be adulterated. Prosecutions were instituted in thirteen cases and fines amounting to £11 9s. 6d. were ordered to be paid in addition to costs amounting to £2 19s. 0d."

WATER AT SPIRIT PRICE.

At Milford News, James Williams, the Golden Lion, Charles Street, was summoned for selling adulterated whisky. This case came on for hearing at last Court, but as the report of the public analyst was disputed by the defendant, who desired to put in the certificate of a London analyst, it was agreed to forward the one-third part taken by Sergt. Brinn, and sealed up, to Somerset House for Government analysis.

The magistrate's clerk (Mr. H. J. E. J. Price) said he had received the report from Somerset House. He had taken the sample as given him by Sergt. Brinn and himself handed it to the Postmaster, from whom he had a receipt.

The Chairman then read the reply. It stated that the sample was received securely sealed, and the analysis showed that it had a strength 51 degrees under proof, which was 26 degrees below the limit of whisky. The Chairman then said he had received a letter from the defendant, who was not represented there. The defendant said that being unable to attend, and having no defence beyond the analysis he had procured from Dr. Stephens, he left the matter in the hands of the Justices. This Dr. Stephens stated that he was of opinion that the sample submitted to him was genuine whisky and of more than the requisite strength, being 25 under proof.

The Chairman said the question the bench had to decide was whether they were satisfied that the whisky taken from the Golden Lion by the Sergeant was kept in his custody sealed up and untampered with when handed over to Mr. Price; also that Mr. Price posted it in the same state, because at the last court the defendant made a strong insinuation that the whisky had been tampered with.

In answer to the Bench, Sergeant Brinn said the public analyst said that the whisky was 50½ degrees under proof, and the Government analyst 51, so that there was only a quarter of a degree between them.

After some consideration, the Chairman said the Bench were divided in their views, but he agreed with the decision, which was to fine the defendant £3 and costs.

At Walsall, on Nov. 17th, William Askew, The Stores, 38, High Street, was summoned for selling whisky adulterated with 9·6 per cent. of water beyond the amount allowed by law. For the defence it was said that the defendant had only been in the house about three weeks, and had taken over the whisky from the previous tenant. He himself had not tampered with the whisky in any way. The Bench inflicted a fine of 40s. and costs.

At Hayward's Heath Petty Sessions, on November 15th, John L. Butcher, of the Ship Hotel, Cuckfield, was summoned for selling to the prejudice of the purchaser, on September 23rd, gin adulterated with 40 per cent. of water. Mr. H. F. Gates, Brighton, defended and pleaded guilty. He said his client had been a licensed victualler for over thirty years, and during the whole of that time there had never been anything against him. He (Mr. Gates) had found that the analysis was quite correct, and under these circumstances Mr. Butcher had instructed him not to defend the matter in any way, although he (Mr. Gates) thought he was right in saying there would have been a good defence on the ground that he had a dilution notice exhibited in the house, but Mr. Butcher did not desire to take advantage of that. The gin was sold at a time when his client was ill, and he asked the magistrates to believe that it was an accidental occurrence and to accept defendant's expression of regret, and to deal with the case leniently. The magistrates imposed a fine of 10s. and costs, the Chairman remarking that the justices had taken into consideration defendant's character.

At Brentford Petty Sessions, on November 11th (before Mr. Montagu Sharpe, chairman, Mr. A. S. Montgomery, vice-chairman, and a full bench of justices), Henry Purser, of the Jolly Blacksmith Inn, Twickenham, was summoned, at the instance of Inspector W. Tyler, under the Foods and Drugs Act, for having sold Irish whisky adulterated with 49 per cent. of water.

Mr. C. Robinson, instructed by the Brentford and Ealing Licensed Victuallers' Association, defended.

The formalities were admitted, and the certificate of the County Analyst (Mr. E. Bevan) was produced, showing proof spirit 51 parts, water 49. For the prosecution, Inspector Tyler submitted that even if the allegation that a notice of dilution was exhibited was pleaded, it would be no protection to the defendant, as the adulteration was so excessive. If the publican was to be protected in cases of adulteration by putting up a notice, "Spirits sold here are diluted," where could he stop? He might just as well sell water and charge for spirits.

Cross-examined: Inspector Tyler denied that he saw any notice of dilution in the bar, but he looked in front of him for one. He went in for the express purpose of buying the whisky.

Mr. Robinson: And you know that it is no offence if a notice is publicly put up in a conspicuous place, stating that it is sold as diluted?—I would not admit it in this case. No explanation was offered him when he was served.

Mr. Robinson said that he had a perfect answer to the case upon its merits, but he based his defence in the first instance upon the notice placed in the bar. In the most conspicuous place, directly under the clock, and visible from all parts of the bar to those who wished to see it, was a notice of the usual kind that all spirits sold were diluted. And so long as the publican exhibited such notice, so long he was protected against the Act, provided he sold substantially the article he was asked for. If he sold otherwise he could be protected by giving special notice to the purchaser. In this case the sale was of an ordinary nature, and the notice was one that had been exhibited for five years. Of course, if the inspector would not see it, the defendant should not suffer.

The Chairman: I think you have no right to say that.

Mr. Robinson: An inspector will not hunt all over the place for a notice. He would never call attention to himself in such a way. I think he ought to have satisfied himself there was no notice at all.

The Chairman: But under the 8th Section of the Act, how far can any notice give the protection you talk about? Assuming there was a notice, assuming it was seen and read, it must be shown that the addition of the water was not "with intent to fraudulently increase the bulk weight or measure." Those are the governing words.

Mr. Robinson: I say there is no intention to defraud in doing it. In the well-known chicory case, where there was an increase in bulk, it was held that the notice was sufficient.

The Chairman: But look at the extent of the adultera-

tion. The law allows breaking down to 25 per cent., but he has gone 24 per cent. beyond that. The question is, is that fraudulent or not?

Mr. Robinson: In the case of starch in cocoa, you will remember that there was 70 per cent. addition, and it was held that the notice that this was a mixture was good.

The Chairman: I cannot tell why you publicans cannot put a notice on each tap or bottle stating the extent of the dilution, or why not let the customer add the water himself to his liking from a bottle. Here you are only two points from being over the border line. Two more points, and it would be water adulterated with whisky. (Laughter.)

Mr. Robinson: I say that no line can be drawn.

The Chairman: Do you say that one part whisky and ninety-nine water would suffice?

Mr. Robinson: In law it would be whisky diluted, and the notice would apply. Upon this point we have the decision of the glycerine and lime juice case, when the Court held the smallest trace of glycerine was sufficient. In selling this spirit there can be no limit, and if your worship set the dividing line at 50 per cent. we are a point below it, and on the right side.

The Chairman: My opinion, and that of my colleagues, is that 24 per cent. beyond the legal 25 per cent. is an adulteration which that notice will not protect.

Mr. Robinson: Then I have to show absence of fraud. The whisky, he went on, was put into a tank overhead, and passed by means of a pipe to the tap in the bar. It so happened that the defendant the morning the inspector called had cleaned the tank out, and in refilling he put in the water first. He added it in the proportion of one quatern to half a gill of water. The spirit was put in afterwards, and it would seem that the water got into the pipe, and the spirit did not have time to mix with it. The inspector was the first one served, and he got the greatest proportion of water. The defendant should have put in the whisky first, and he would have been on the safe side.

The Chairman: Then his first customer would have got most whisky?

Mr. Robinson: Which is no offence (laughter).

The Defendant, sworn, gave evidence supporting this explanation. He had scalded the cistern out, and he thought some water must have got left in the pipe. He had a notice in the bar in a very conspicuous place, and it could be seen by everyone.

Mrs. Ida Purser and Mr. Sharpe, an architect, gave corroborative evidence.

The Chairman, in giving judgment, said that his colleagues were unanimously of opinion that there was a fraudulent intention on the part of the defendant to increase the bulk weight or measure of the whisky. That being so, under Section 8 the exhibition of the notice was no protection. Considering the excessive amount of water—the enormous lot of water, he might say—they had determined to make an example of the defendant. He would be fined £5 and costs, and his licence would be endorsed.

Mr. Robinson asked that the licence might not be endorsed. The offence was one against the Food and Drugs Act, and not against the Licensing Act, and it was very hard to penalise the defendant under both. The defendant had not offended against the terms of his licence, and the Bench, in dealing with him in that way, were fining him equal to £100 or £200.

The Chairman (after further consultation) said the Bench could not alter their decision.

MILK.

MARY SIDDALL, of 4, Rodney Lane, Sheffield, for whom her husband appeared, was charged on November 19th with watering milk. Mr. Collingwood (Town Clerk's department) prosecuted, and described the case as one of the worst of the kind that had ever come under the notice of the sanitary authority. A Corporation inspector was

taking samples from milkmen in the Park on Sunday morning last, when he met Mrs. Siddall with her milk-cans. Immediately she saw him she turned off the street into a yard, as if to avoid him, but he followed her, and when he came up to her she was mixing the milk from two different cans. He purchased two samples from her, one from each of these cans, and took them to the City Analyst, and the City Analyst, Mr. Collingwood said, had reported that one contained 30, and the other 28, per cent. of added water. Siddall, who appeared to be taking the responsibility for his wife, said he had had bad luck with his cows, and had been buying his milk where he could get it. The Stipendiary informed Siddall that unless he obtained a written guarantee of purity along with the milk he purchased, he must take the consequences if the milk was found to be adulterated. Mr. Collingwood said there were three previous convictions against the defendant, and upon that the Stipendiary imposed a fine of £4 and costs.

AT GODALMING Petty Sessions George A. Coulson, milk-dealer, was summoned under the Foods and Drugs Act, for vending milk deficient in butter-fat. No objection was made to Mr. Rea, who is a County Councillor, sitting on the Bench. Defendant pleaded not guilty, and was represented by Mr. L. J. M. De Michele.—Mr. Frederic Cliffe, county inspector, stated that on the 25th October he was in Upper Church Road, Farncombe, and saw a lad named Pullen, coming from a cottage with a can of milk. He went to him with a jug he had in his bag, and asked for a pint of new milk. He told the lad that he had purchased the milk to have it analysed, and he now produced the certificate of Dr. Stevenson. This showed that the sample was deficient in butter fat 37 per cent., which opinion was based on the fact that the sample contained 1·88 per cent. of butter fat, whereas normal milk had at least three per cent.—Cross-examined: It was not alleged that water was added to the milk.—Defendant said he tested the milk with a creamometer before he sent it out, and found that it contained 10 per cent. of cream. He bought the milk from Mr. Shotton. He did not put boracic acid in his milk. The boy would take half-an-hour to get to Farncombe. He tested the milk when it returned, and found about 14 or 15 per cent. of cream. He sent the sample the boy brought back to Professor Stokes, and produced his certificate. Cross-examined: There was 10 per cent. of cream when the milk was sent out, and 15 per cent. when it returned. The lad, Wm. Jas. Pullen, also gave evidence. A fine of £1 and 12s. 6d. costs was imposed. The Bench remarked that they were perfectly satisfied that there was no wilful intent.

AT EXETER, on Nov. 12th, William Wills, dairyman, Exwick, was summoned for selling milk adulterated. Mr. G. R. Shorto prosecuted, and Mr. W. H. Tarbet defended. The Town Clerk (Mr. G. R. Shorto) said there were three charges against defendant, two in respect of samples sold to Mrs. Croydon and one in respect of a sample sold to Mr. Wreford, inspector under the Foods and Drugs Act. Defendant vended milk in Exeter. The inspector met him, and asked for samples of raw milk from two cans he was carrying. Defendant said he had been delivering scalded milk. The inspector went to the man's cart, and there saw three cans. One contained scalded milk, another raw milk, and the third water, with a little milk added. Samples of the raw and scalded milk were taken by the inspector, and afterwards submitted for analysis. The scalded milk was found to be pure, but the raw milk had four per cent. of added water. Mr. Wreford went to Mrs. Croydon and saw on the table two jugs, each containing 1½ pints of milk, one scalded and the other raw. Samples were taken, and on analysis it was found that the raw milk was adulterated with 13 per cent. of added water, and the scalded milk with 16 per cent. The Town Clerk suggested that the milk supplied to the customer was taken with a certain amount of judgment from each of the three cans; and that being so he did not hesitate to charge the defendant with a deliberate fraud under the Act. The means of adulteration

were carried about in a cart, and even to the customers' door, so that there could be no doubt the adulteration was wilful. Defendant was liable to a penalty of £20 for each of the three offences; and he asked the Bench, if the case were proved, to mark their sense of feeling against a practice which was nothing less than a fraud.—Mrs. Croydon said she paid defendant 3d. for a pint and a half of raw milk, and a penny for a pint and a half of scalded. The jugs in which the milk was put were quite dry and clean.—Mr. Tarbet said it would be idle for him, after the statement made, to resist the action. He could not offer any evidence to put a different construction on the case; but he asked the Bench not to inflict a heavy fine. The fact that there was water in one of the cans was accounted for by the fact that defendant, having emptied it, took it into the market to wash it out. Nothing had been alleged against Mr. Wills before, and he had not even been cautioned. The analyses were put in. The Bench considered the case one of the worst that had ever come before them. Poor children, as well as invalids, were dependent upon the quality of the milk supplied, and they thought they must make an example in the present instance. Defendant would be fined £3 in each case—£12 in all, including costs. A month was allowed for payment.

At Hull on Nov. 17th, Annie Sturdy answered a summons issued at the instigation of the Hull Corporation for selling milk adulterated with 27 per cent. of added water. The Town Clerk (Mr. Laverack) appeared to support the complaint, and Mr. Dodgson (Rollit and Sons) defended.

The milk was purchased on the 22nd ult., and on being analysed was found to be adulterated as stated.

His Worship, in inflicting a fine of 40s. and costs, said that it was impossible to pass over such a case with a nominal penalty.

MEAT.

EDWARD GEORGE SELMAN, of Westerleigh, was summoned, at Bristol, on November 17th, for being, on November 1st, in the possession of a carcase of a bullock in a cart, which, it was alleged, was placed there for the purpose of sale for the food of man.—Mr. Wise (of the Town Clerk's office) appeared for the prosecution, and Mr. Gledstone defended, pleading not guilty on behalf of his client.—Mr. Wise stated that the facts of the case were as follow: On November 1st, Mr. Thomas, meat inspector, was in Lawford-street, and, outside the premises occupied by a Mr. Harding, a butcher, noticed a butcher's cart, on which was the defendant's name. When the defendant came out of the shop, Mr. Thomas asked him to let him see what was in the cart. Upon removing the cloth the inspector saw the carcase of a sheep, which was in a sound condition, and also the carcase of a bullock. The inspector found that the bullock had been suffering from blood-poisoning, and the meat was perfectly unfit for food. He believed the only question of the case was whether the defendant intended to dispose of the meat for the food of man, and the evidence on which he was going to ask their worships to come to the conclusion that it was, was the conversation between the inspector and the defendant. The inspector asked Mr. Selman whether the meat was his, and he replied, "It was brought to me by a farmer named Worlock, who asked me to kill it and dress it, and bring it to Bristol and do the best I could with it. If I could not do anything with it I was to take it to Mr. Stone's yard and sell it there." The inspector then said: "I suppose you were waiting for Mr. Harding to buy the meat?" and the defendant replied, "I was." Samuel Thomas, inspector of meat, corroborated this statement. Mr. Gledstone, in defence, urged that the defendant had acted practically in ignorance of his doing wrong. In the first place, he admitted that the animal was diseased, and in the second place he admitted that the defendant

brought it to Bristol to dispose of it, but not to dispose of it for the food of man. The butcher Harding had ordered the sheep and it was being taken to him, but the defendant was afterwards going to take the bullock's carcase to Mr. Stone's yard to be converted into manure. Samuel Thomas, recalled, said that the carcase of the bullock was dressed as for sale. If the animal had been killed merely for the hide, the carcase would not have been dressed. The bench said they had given the case careful consideration, and had come to the conclusion that the case had been made out. They therefore would impose a fine of 40s. and costs.

MARGARINE.

At Belfast, on November 16th, William Donaldson and Elizabeth Donaldson, 63, Beaver-street, were summoned by David M'Master, inspector under the Food and Drugs Act, for selling margarine as butter, and also for selling margarine without being duly labelled, on the 25th October.

Mr. D. F. Spiller prosecuted, and Mr. Nathaniel Tughan defended.

Mr. Tughan said that Mrs. Donaldson was in charge of the shop on the day in question while her husband was at market, and she was too ill to attend court that day. He (Mr. Tughan) would plead guilty to the offence of not having the margarine properly labelled.

Inspector M'Master said that on the date mentioned he went into the shop of the defendants. He asked Mrs. Donaldson to give him a pound of butter out of a box (pointing to it), and Mrs. Donaldson gave it to him, and charged 1rd. for it.

Mrs. Tughan said that Mrs. Donaldson thought there was nothing but butter in the shop, and that was how the mistake occurred.

Mr. Hodder said that a fine of £5 and costs would be imposed, which would rule all the summonses.

DRUGS.

At Chesterfield, on Nov. 20th, Aaron Cutts, shop-keeper, Brimington, was charged by Colonel Shortt, Inspector under the Foods and Drugs Act, with selling, on Oct. 14th, tincture of rhubarb which was deficient in proof spirit and solid ingredients.—Mr. Walker defended.—The Inspector said such a drug was generally sold by chemists, and the article in question was practically worthless. Its medicinal qualities were reduced one-third.—Mr. Walker pleaded guilty to a technical offence, but said the article had been in stock some years, and had thus lost its virtues.—A fine of 5s. and costs was imposed.

BREAD.

At Brentford on November 18th, Robert Neville, 41, a baker of Acton Bakery, was charged on a warrant with having sold bread otherwise than by weight. It will be remembered that the defendant did not appear to answer the summons taken out by Inspector Tyler under the Food and Drugs Act, and the magistrates refused to hear the case until he put in an appearance.—The defendant now appeared, and in answer to the usual question, he said he really did not know if he were guilty or not, and would rather hear the evidence first.—Inspector Tyler said that on the 8th of November he saw a man in one of defendant's carts delivering bread at a shop. He was paid 1s. 3¼d. for six loaves. He did not weigh the bread, and witness did so instead. The first loaf weighed was half an ounce light, the second three-quarters of an ounce light, the third correct, the fourth half an ounce light; the fifth one and a half ounces heavy, and the sixth one and a half ounces light. A witness named Grierson corroborated. The defendant said this was the

first summons his firm had been served with for twenty years. The question had been raised at the London County Council, and he had been advised to use a bill describing the bread as two-pound loaves, which he had done. The Chairman said this was no excuse whatever. The Bench were of opinion that a technical offence had been committed, but recognising that it was a difficulty to comply with the exact requirements of the Act, they would only inflict a small fine of 10s. and costs.

OLIVE OIL.

At Woburn Petty Sessions, William Charles Emery, grocer, of Woburn, was charged at the instance of the Inspector under the Food and Drugs Act with having sold a flask of olive oil which was not of the nature and substance demanded.

P.s. Mason, an Inspector under the Food and Drugs Act, deposed to purchasing a flask of oil for sixpence on October 18th. The oil was divided in the usual way, one-third being sent to the county analyst, Dr. Stevenson, whose certificate (produced) showed that the oil was adulterated with 90 per cent. of cotton seed oil. After witness made the purchase, the assistant who served him said the oil was sold for cart greasing and similar purposes.

Mr. Emery pleaded that the offence was not committed wilfully. His consignments of olive oil had previously been marked, but such was not the case upon the flask sold to the inspector. His assistant took it to be the same kind of oil as that which had been marked. The inspector was told the oil was intended for greasing purposes.

A fine of 10s. and 21s. 6d. costs was imposed.

LIQUOR LABEL COUNTERFEITS.

ONE of the largest liquor-label counterfeiting schemes ever operated in America was unearthed at Chicago last month.

After four hours' work fully 25,000 dollars worth of labels, representing all the leading brands of liquor, bottles and cases, were found. Five big express waggons were backed up to the door of the building, and they were filled with the confiscated goods.

Eleven men formed the raiding party which swooped down upon the bottling factory of Wittemann Brothers and Company, 125-129, North Sangamon-street. It was not until the well-hidden secret-working shop at 131, Sangamon-street had been discovered, that convicting evidence was found in the factory.

Charlton and Copeland, attorneys for some of the leading liquor exporters of Europe and America, headed the raid.

Constable Eckert read the search-warrant to August St. George, president of the concern. Mr. St. George at once became excited and declared he knew nothing about a "counterfeiting gang."

Through a long, narrow, ill-smelling passageway that leads between two frame buildings the members of the searching party hurried until they arrived in the rear. A shout from him announced that an important find had been made. In a short time a score of lamps and lanterns shed a bright light over boxes containing empty bottles each bearing the name of some well-known liquor. In another little room more boxes and cases were found, and in the next room were millions of labels and all the necessary articles for carrying on fraudulent imitation of liquors.

Scores of bottles, along with a quantity of half-mashed corn and grain, were scattered around the ground and wooden floor, but this was all the trace of distilling apparatus found.

Such well-known brands as J. A. Gilka, of Berlin, J. & F. Martell, James Hennessy & Co., Coates & Co. (Plymouth gin), Boonekamp, Booth & Co., Pepper & Co., and scores of others are the losers by the counterfeiters.

President St. George, of Wittemann Bros. & Co., insisted that his firm did not rent the basement. George Frantzen, agent for the building, said he rented the basement to Wittemann Bros. A Co.

After the work had been completed in the basement another search was made of the Wittemann factory, and here parts of boxes ready to be nailed together, and bearing the marks of James Hennessy Company, were found.

"KURDO" CHEESE, "SPENT GINGER," AND OTHER PROSECUTIONS IN BIRMINGHAM.

THE Midland Stores (Limited), Jamaica Row, were summoned for selling adulterated cheese. Mr. Hiley (from the Town Clerk's Office) stated that on October 15 a girl named Ellen Turner was sent to purchase a pound of five-penny cheese, which she handed over to Inspector Jones on his entering the shop. Dr. Hill's certificate showed that the cheese was adulterated with 30 per cent. of foreign fat, consisting of a mixture of lard and beef fat. Mr. Norris Foster (instructed by Messrs. Jaques and Son) defended, and produced a label bearing the word "Kurdo," which it was alleged, appeared on the cheese, and also a notice warning the shop assistants that no article was to be sold under a wrong designation. When the defendants found that the assistant had sold this "kurdo" as cheese they at once discharged him. The Bench elicited that the defendants had been previously convicted, being fined £5. Mr. Fisher said that the Bench were determined to put a stop to these practices, and they imposed a fine of £10 and costs.—Thomas Moore, 226, Camden-street, for selling coffee which Dr. Hill certified to be adulterated with 50 per cent. of chicory, was fined 20s. and costs.—Kate Parkes, of Newhall Hill, who had sold at 1s. a pound a quarter of a pound of butter which had been adulterated with 80 per cent. of foreign fat was fined 40s. and costs.—Martin Andrew Maley, of 441, Dudley-road, the defendant in the next case of the series, had sold butter adulterated with 85 per cent. of added fat. Inspector Jones said that immediately behind the stuff on defendant's counter was a placard bearing the words "Pure butter." The price charged for the compound was 1s. a pound. Fined 60s. and costs.—Annie Porter, carrying on business at 264 and 265, Broad Street, was summoned for selling a quarter of a pound of butter which was adulterated to the extent of 70 per cent. The price charged was 3½d. Mr. Dale, in defence, said the case arose through the mistake of a boy, who brought up the wrong article from the cellar. The Bench inflicted a fine of £5 and costs.—There was another prosecution against this defendant in respect of a quarter of a pound of root ginger, for which 2d. was paid. Mr. Hiley said the ginger was deficient to the extent of 25 per cent. in essential constituents. The assumption of the prosecution was that the article had been used for some purpose, probably for making ginger-beer, and had afterwards been doctored for sale. Dr. Hill stated, in addition, that the ginger had been faced with carbonate of lime. This was a common practice. In cross-examination witness said it would be difficult for the retail grocer to know that this ginger was not genuine. The Bench inflicted a fine of 5s. and costs.

FORMALDEHYDE AS A PRESERVATIVE OF MILK.

PROF. J. N. HURTY does not share the misgivings which have been expressed lest the use of this antiseptic provoke dyspepsia. He states (*American Druggist*): For a child affected with marked indigestion, obviously due to fermentation, I recently recommended that cow's milk be treated immediately after being taken from the animal with five drops of 40-per-cent. solution of formaldehyde to each quart, and that the child be fed with the milk thus

treated. Two weeks' trial of pasteurised milk had not brought relief. Within ten days after commencing the use of the formol-milk a decided improvement was apparent. Its continuation resulted in complete cessation of the symptoms. Now, after ten weeks' trial, with two intermissions, which admonished a return to formol-milk, the child is in excellent condition. Upon the principle that it is best to do without all substances of this character when not actually needed, the formol has been discontinued, and the strength gained while using it has so far (six days) sufficed to contend against the influences which were before prominent. The most careful examination fails to discover that any stomach or bowel lesion exists. If a "lifelong dyspepsia" should very soon begin, it would not be entirely unfair to conclude that the formaldehyde was caustic to a considerable degree, although acute indigestion undoubtedly existed prior to its exhibition.

FORMALDEHYDE IN ACID INDIGESTION.

Being cursed myself occasionally with acid indigestion, I have used formaldehyde as a preventative of the fermentation which causes the acidity, with most excellent results. Whenever the acid condition develops, I immediately abandon all foods except milk, and this I take, drinking it slowly, after adding to each eight ounces ten drops of 40-per-cent. solution of formaldehyde. The results have been excellent, and although I have taken the agent in this way many times during the last year and a half, only the most desirable effects have been observed. For one week, as experiment, I took three times a day, after meals, four ounces of milk containing five drops of 40-per-cent. formaldehyde solution. Not the least untoward result at the time or since has been noted.

EFFECT OF BOILING UPON POTATOES.

IN a recent bulletin issued by the U. S. Department of Agriculture the nutrient losses by boiling of various vegetables are considered. The reports of several experiments show that when potatoes are boiled with the skins removed, there is a very considerable loss, not only of organic nutrients, but also of mineral salts. These salts, while not nutrients in the sense in which this term is frequently used, are nevertheless important in nutrition. They are of especial value, because of the potassium compounds they contain, and are apparently necessary for health. The greatest actual loss of nutrients seems to be due to the mechanical abrasion of the soft outer portions of the potato while cooking. In this case nearly 3 per cent. of the carbohydrates and 4 per cent. of the available flesh-forming nitrogenous matter are lost. When the potatoes are boiled with their skins on, the loss of nutrients is very slight, consisting chiefly of non-albuminoid nitrogenous substances and mineral matter. It is self-evident that if it is desired to boil potatoes with as little loss as possible the skins should be left on. From an average of 86 American analyses the composition of the whole potato is—water, 78.0 per cent.; nitrogen (total), 0.35 per cent.; protein, 2.2 per cent.; fat, 0.1 per cent.; carbohydrates, 18.8 per cent., and ash, 0.9 per cent. The average of 178 European analyses is: Water, 75.0 per cent.; nitrogen-albuminoid, 0.19 per cent.; total, 0.34 per cent.; protein, 2.1 per cent.; fat, 0.1 per cent.; carbohydrates—nitrogen free extract, 21.0 per cent.; fiber, 0.7 per cent.; ash, 1.1 per cent.

CONDENSATION OF LIQUIDS BY FREEZING.

THE possibilities of the freezing process in the condensation of milk, fruit juices, meat extracts, malt extracts, and some medicinal extracts was interestingly set forth in a paper by B. F. McIntyre, manager of the chemical laboratories of McKesson and Robbins, read before the New

York College of Pharmacy on the evening of October 19th. Mr. McIntyre was not able to attend the meeting himself, and in order to get a few more details regarding the process, a reporter called on him and learned what has been done in this comparatively new field of industry.

The idea of the inventor is to produce a superior quality of goods rather than to furnish a cheaper mode of condensation. At the same time he believes that even in the matter of cost, the new process has certain advantages. The principal objection to the present method of condensing fluids is the high degree of heat necessary to do the work, even when a partial vacuum is maintained. In the case of milk and meat extracts, the effect of heat is clearly apparent to the palate. Condensed milk does not taste like real milk, and extracts of beef are never mistaken for fresh meat juice. These changes in flavour are the result of a partial decomposition of the original ingredients impairing their value as foods. Theoretically, it is possible with the best vacuum appliances to condense milk, for instance, at 115 degrees F. temperature, but, as a matter of fact, the work is generally done at a temperature nearer 160 degrees F. Such a rise in temperature produces a chemical change in the milk. In the case of malt extracts, the condensation results in a reaction between the starch present and the active ingredient, diastase, resulting in a thick syrup, the main constituent of which is sugar. Physicians all recognise the fact that the usual meat extracts are of little value as foods, and only permit their use as stimulants.

Mr. McIntyre's process does not affect the chemical composition of these substances. The temperature may be reduced to 32 degrees above zero. It cannot by any possibility go lower, so long as any of the water remains uncongealed. The temperature of the atmosphere in the freezer is about 6 above zero. The process depends on the principle that when a mixture of water and other ingredients begins to freeze, the water freezes first as a thin sheet across the top of the fluid. In the case of milk, the fluid is first separated into cream and skimmed milk by the usual centrifugal process. The cream is set aside, and the skimmed milk alone is subjected to the freezing process. It is placed in shallow metal pans in an enclosed chamber, the atmosphere of which is reduced by the ammonia process. As fast as the surface of the milk freezes it is broken up into flakes resembling snow by an automatic system of rakes. The result is that in a short time the entire contents of the pans consists of a mush-like mixture of clear ice crystals and thick milk. This is then placed in the centrifugal separator and the milk is driven out of the ice. A jet of steam applied for a moment to the separator at the end of the process serves to wash the ice crystals of nearly all adhering milk. The freezing process is gone through three times, less and less ice being obtained each time. The result is a condensed milk that tastes in all respects like ordinary milk, only more concentrated. This is then thoroughly mixed with the cream and the product is ready for the market.

Mr. McIntyre says that the ice derived from the process on being melted shows only a slight discolouration, such as is observed when an empty glass that has contained milk is filled with water. Assays show that this snow contains only about two-tenths of 1 per cent. of milk solids. The volume occupied by this condensed milk is only 22 per cent. of that of the original volume of milk, which compares favourably with the results obtained by evaporation.

In the case of coffee, an infusion separated by this process results in an almost pure white snow and jet black coffee extract, a spoonful of which, mixed with water, makes a drink possessing much of the aroma of fresh coffee. Fruit juices prepared in this way retain the exact flavour of the crushed fruit, it is said.

One element of economy which Mr. McIntyre points out is the utilisation of the ice produced to lower the temperature of the freezing apparatus, thus saving fuel. A paper by Mr. McIntyre on this interesting subject was published in *The Era* of August 1st, 1895.—*Pharm. Era*.

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Food and Sanitation.

SATURDAY, DECEMBER 4TH, 1897.

A SPIERS AND POND ADULTERATION CASE, AND A NAUSEATING DEFENCE.

At the Kensington Petty Sessions, held at the Town Hall, Kensington, on November 23rd, Messrs. Spiers and Pond, Ltd., of 35, New Bridge Street, Blackfriars, E.C., the well-known refreshment contractors, were summoned at the instance of the Kensington Vestry for selling a sample of brandy and two samples of whisky which were not of the nature, substance, and quality of the article demanded.

The Vestry Clerk (Mr. William Chambers Leete), who appeared for the prosecution, stated that the summonses were taken out under Section 6 of the Sale of Food and Drugs Act, 1875, the samples in question having been purchased by the Vestry's Inspectors (Messrs. A. Ellenden

and H. E. Hawkins), under the Sale of Food and Drugs Acts, from two of the defendants' refreshment bars at the Victorian Era Exhibition at Earl's Court, on Trafalgar Day, October 21st last.

The two inspectors bore out the statement for the prosecution and produced the certificates of the Public Analyst for Kensington, showing that the brandy was 30·84 degrees under proof, and the whiskies 31·08 and 27·41 degrees under proof respectively.

Mr. J. P. Grain (instructed by the solicitors acting for Messrs. Spiers and Pond, Limited), who appeared for the defence, stated that the spirits had been tampered with by the defendants' servants, although express instructions had been issued to all the employees engaged at their refreshment bars not to do so, and he contended that the defendants were not liable for the acts of their servants, basing his contention on the judgment given by the Court of Queen's Bench in the case of *Kearley v. Tyler*, in which it was held that there was nothing in the Sale of Food and Drugs Act which makes a master liable for acts done by a servant contrary to orders.

Amongst the witnesses called for the defence was the waitress at "P" Bar, Miss Florence Cotter, who served the brandy and one of the samples of whisky, and who stated that she had on the date in question, prior to the visit of the inspectors, emptied into the brandy and whisky decanters, out of which the two samples supplied to the Inspectors were taken, the remaining portion of a glass of brandy and water, and also a portion of a glass of whisky and water, which had been left on the counter of the Refreshment Bar by customers, and gave this as the reason for the presence of water in the brandy and whisky which had been sampled.

A further witness, Miss Richards, was called, who stated that she was at "O" Refreshment Bar, from which the other sample of whisky was purchased, and that she had, in consequence of a complaint which had been made to her that the stock in the bar under her charge was unsatisfactory, put about one pint of water into the syphon which supplied the tap from which the sample of whisky was purchased, thus accounting for the quality of the spirits sold.

Mr. Leete, in replying to the legal points raised by counsel for the defence, cited the case of *Brown v. Foot*, in which it was most clearly laid down by Justices Hawkins and Wills that the master must be held responsible for the acts of his servants in regard to a contravention of the provisions of the Act, and he asked the Bench, without entering upon the merits of the extraordinary statements which had been made by the witnesses called for the defence, to find that offences under the Statute had been committed, and that the defendants, Messrs. Spiers and Pond, Limited, must be held responsible for the sale of the adulterated samples of spirits, the subject matter of the summonses issued against the Company.

The Bench decided to convict the defendant Company in regard to the three summonses, and a fine of £5 and 10s. 6d. costs was inflicted in each case, making the penalty £15 in all.

However such a defence came to be astounds us. The very thought of "tailings" or "heel taps" left by persons who may have diseased lips, cancerous, syphilitic, or like mouth sores, is not only nauseating, but it is as disgusting as it is indefensible. For gorge-raising practices like these fines ought not to be permitted.

From the *Daily Mail* we learn that: "According to the terms of a circular which Messrs. Spiers and Pond are sending round, the company has decided to combine the refreshment contracting business with that of a newspaper and general advertising agency.

"The circular in question invites the newspaper proprietors to quote the very lowest and latest prices, and in a significant postscript it is suggested that under special circumstances the company may be permitted to 'name a less price than ordinary scale.'"

Our contemporary says: "Anyhow, the new enterprise does not commend itself to the *Daily Mail*, nor to the

Evening News, nor, indeed, to any of the other score or more of papers which are associated with these journals. How the shareholders will take the abandonment of the conservative policy which has built up the business of Spiers and Pond, Limited, remains to be seen, if this strange departure is really to be persisted in. The mixing-up of advertising and licensed victualling is calculated to cause the absent-minded to call in at T. B. Browne's or Sells' for a whisky and cigar, or to interview the Hebbs at Ludgate Hill Station about the price of a series of births, deaths, and marriage announcements. It is a ludicrous business."

In the light of these prosecutions at Kensington, it appears to us that it is more than a ludicrous business, and neither conducive to the interests of the public, nor of Spiers and Pond's shareholders that the present management should continue.

Persons who gravely instruct a counsel to put forward a defence exposing practices which, were they generally known, would cause the public to avoid Spiers and Pond's refreshment bars, are not for obvious reasons fit to be entrusted with the control of a large business. Such "blazing indiscretions," to call them by their mildest term, would secure the dismissal forthwith for any servant. If Spiers & Pond's shareholders do not wish to see their business go to the dogs they will have to make a clean sweep of the present lot of directors, &c. The milk notices were bad enough. These whisky practices are dangerous and nauseating.

LORIMER'S QUININE WINE.

At Swindon Petty Sessions, on Nov. 25th, Edward Rogers, grocer, of Faringdon-street, New Swindon, was summoned for selling orange quinine wine not of the nature and quality demanded. Mr. H. Bevir prosecuted on behalf of the County Council; Mr. A. E. Withy appeared for the defence. Mr. Bevir said the wrapper round the bottle bore the words, "This orange quinine wine has been examined at Somerset House by the Inland Revenue authorities, and found by them to contain the proper quantity of pure quinine as ordered by the British Pharmacopœa. Recommended by British practitioners in all parts of the world as a most grateful and invigorating tonic. Orange quinine wine contains two grains of pure sulphate of quinine in each wineglassful." An analysis of the wine showed that the sample contained 2·2 per cent. of alcohol, and not less than 75 grains per gallon of salicylic acid. He was there to challenge the right of a person selling orange quinine wine to sell with it a considerable quantity of salicylic acid without giving notice to the purchaser. This acid was a well-known antiseptic and preservative, and he suggested that it was introduced because, in view of the low percentage of alcohol, the wine would not otherwise keep. Alfred Thornton, assistant inspector, proved purchasing the wine, and Inspector Smith spoke to dividing the sample. He had had considerable practical knowledge of chemistry, and had made hundreds of gallons of quinine wine. He knew of no preparation given the name of wine containing so low a percentage of alcohol as 2·2. Salicylic acid was not a proper ingredient to put into a tonic like quinine wine. The effect of its introduction would be to preserve the mixture, and he said it would be needed to preserve it, having regard to the low percentage of alcohol. Cross-examined: There was no formula in the British Pharmacopœa for orange quinine wine. He did not think that the ordinary man in the crowd went for the wine and not for the alcohol; he went for the quinine and the wine as well. He said he was prejudiced because acid was put in instead of alcohol; salicylic acid was better. The quantity of the acid in the sample was '4 grains per ounce. According to the "Pharmacopœa" the proper dose of salicylic acid was 5 to 30 grains, so that it followed that '4 grain per ounce would not be injurious to health. On second recollection he did remember one case where a small percentage of salicylic acid was introduced. Re-cross-examined: The effect of salicylic acid as a drug had a de-

pressing effect, rather than the effect of a tonic. Professor Munro spoke to receiving a sample of quinine wine and making a careful analysis. It contained 2·2 per cent. of alcohol and nearly 20 grains per pint of sulphate of quinine. There was no complaint that there was any deficiency in quinine if this was compared with the "Pharmacopœa." The preparation had not been made with wine of any kind, and it did not come under any definition known to witness. The salicylic acid in the mixture showed a proportion of not less than 75 grains per gallon, or nearly a grain per wineglassful. Having regard to the low percentage of alcohol the addition of the acid would have the effect of a preservative. In his opinion the addition would go to prejudice the purchaser. The artificial preparation of salicylic acid—that used in the present case—had been found to contain harmful ingredients. Cross-examined: It was the ordinary medical opinion that salicylic acid depressed, but there was an opinion in some quarters that the perfectly pure acid had not that effect. He believed it very possible that the acid in one of the bottles of quinine was harmful, supposing, for instance, that it was taken four or five times a day. The deficiency of alcohol was one thing which operated to the prejudice of the purchaser, and the presence of the acid was another. Alcohol was a stimulant, and that was what the purchaser required. Alfred Wright, pharmaceutical chemist, of Yeovil, with 29 years' experience, said he had himself prepared orange wine. In that preparation no alcohol was added. He had also made quinine wine, in the making of which orange wine was used. He had never used salicylic acid in making either orange or quinine wine; and he had never known it used. There was not the slightest reason for its introduction. He did not know of any preparation known as wine containing as little as 2 per cent of alcohol. Cross-examined: He agreed that the acid would be added for the purposes of a preservative. For the defence Mr. Withy called Dr. F. E. Streeten, who said 4 grains per ounce of salicylic might be described as an almost infinitesimal dose, and he could not imagine its being added for any other purpose than that of a preservative. He was not prepared to say so small a quantity would be harmful. The physiologically pure acid has not the same effects as the old kind, which brought about depression on account of its impurities. Cross-examined: He should not prescribe salicylic acid, pure and simple, as a tonic, but he had often prescribed it in conjunction with quinine. He did not think three wineglassfuls a day of the preparation in question would have a harmful effect on the system. He utterly declined to say whether, after hearing Dr. Munro, the preparation could be described as orange quinine wine. Horace Brocklesby, member of the firm of Lorimer & Co., manufacturers of the wine, said they sold 15,000 or 20,000 gallons per annum. They manufactured both this preparation and also the wine according to the "British Pharmacopœa" formula. The former was undoubtedly more palatable, and was more popular with the public. In preparing the orange wine they added the alcohol, but in the "B.P." wine the alcohol was generated. The orange quinine actually cost more for production, but they sold it at a smaller price, on account of the demand and competition. They had received no complaints until the spring of this year, and he was perfectly willing to go into that complaint. Cross-examined: In the orange quinine alcohol was added in the form of soluble essence of orange peel, and they prepared this themselves from duty-paid alcohol. The orange quinine wine was invoiced to customers at 8s. a dozen bottles, while the "B.P." wine was invoiced at 16s. It might seem a remarkable fact, but the former cost considerably more in production than the latter; and he was willing to produce the laboratory books to show that what he said was true. Originally the price was the same, but the keen demand and enormous competition had resulted in the price of the orange quinine being again and again reduced. Orange wine was certainly used in the production of the article. Mr. Withy, addressing the Bench, said he hoped that whatever the verdict might be, the magistrates would come to the conclusion that a *bonâ fide* defence had been raised and

that there had been no trick or dodge. He submitted that he was entitled to a verdict on the ground that it was obvious that the purchaser received notice that he was not buying quinine wine, which was the "Pharmacopœa" article, but that he was buying a compound. The public knew nothing of the component parts of the articles; they wanted the quinine—and they got it. The manufacturers might even be held up as public benefactors, for they gave to a certain section of the public the quinine without the alcohol, without in any way taking away from the quality of the article. The article had been manufactured in the face of the law because it was more palatable and the public liked it better than the "Pharmacopœa" article. The prosecution could not allege that an inferior quality of quinine was introduced into the cheaper article, all they could say was that salicylic acid had been put in instead of alcohol. No attempt at fraud had been attempted. The firm were simply catering for the public taste, and inasmuch as the people wanted the quinine the magistrates ought not to be influenced by the fact that it contained only 2 per cent. of alcohol. He also asked the Bench to say that the small quantity of acid—and the physiologically pure acid was used—was not sufficient to prove injurious to the health of the purchaser. If they found there was no increased profit it was a most important factor to prove the absence of fraud, and it had been absolutely proved that the compound cost more in production than the pure article. This might be regarded by some people as nonsense, but he suggested that the explanation was a perfectly reasonable one. Such a statement as had been made by Mr. Brocklesby was too dangerous to be offered in open court unless it was absolutely true. He was fighting nominally for Mr. Rogers, but really for Lorimer & Co., who had carried on business for 20 or 30 years, and had shown no hesitation in coming into court in the present case. Mr. Bevir, in reply, contended that the label gave the purchaser notice that he was receiving a preparation of orange wine and quinine, and not salicylic acid. He suggested that the acid had been added because of the absence from the preparation of an ingredient which should have been included. It struck one as a most incredible proposition that a bottle of wine which cost more to produce than another should be sold at half the price; but of course they had the word of the firm's representative to that effect. The Bench had no hesitation in convicting, and imposed a fine of 20s. and taxed costs. Mr. Withy stated that he might wish to take the case further, and the Bench consented to postpone the entry of judgment for a week.

In respect to a similar case against Arthur Davis Williams, of Bridge Street, New Swindon, Mr. Bevir said the facts were precisely alike, except there was a slight difference in the percentage of salicylic acid. Mr. Withy, for the defence, pleaded guilty, and the Bench imposed a similar penalty.

WATER AT SPIRIT PRICES.

At Bury, on November 25th, James Ramsbottom, licensed victualler, Edenfield, was summoned for selling to Police-Sergeant Sollit Scotch whisky adulterated with five per cent. of water. The officer purchased a pint of whisky, for which he paid 2s. 4d. The analyst showed it was 30 per cent. under proof, 25 being allowed. Defendant said the whisky was three years in bond, and must have lost strength. He was fined 10s. and costs.

At Fishguard Petty Sessions, S. Moore, of the Farmers' Arms, was summoned for selling diluted whisky. Sergeant Rosser, the inspector under the Food and Drug Act for this district, said he called at the Farmers' Arms and bought half a pint of Irish whisky for analysis. The report of the analyst showed that the sample analysed was 5 deg. below the recognised standard for whisky. Mr. W. J. Vaughan appeared for Mrs. Moore and admitted the charge, and called Mr. George Moore, who explained to the Bench that it was accidentally done and expressed regret that it should have occurred. A fine of £1 and costs was imposed.

At Wellington Special Sessions, John Henry Berry,

landlord of the White Horse, Bradford, pleaded guilty to selling one pint and a half of adulterated whisky to P.C. Trask, on the 28th ult.—The constable gave evidence.—Supt. Durham said Dr. Alford (county analyst) examined the whisky, and his certificate showed that it was 32 deg. under proof, or seven parts of water more than was allowed by Act of Parliament.—Defendant said there was a very slow sale of spirits at his house. He bought it in September for 22 deg. under proof from the brewers, and he never did anything to reduce the quality.—Mr. Durham gave defendant a good character.—Fined 10s. including costs.

MARGARINE.

At Wood Green Petty Sessions, Wm. Laskey, 24, Hardy Terrace, Wood Green, was summoned by Inspector Bridge, Middlesex County Council, for having a quantity of margarine exposed for sale without the required label affixed thereto, also for retailing same.

The Inspector said he entered the shop of the defendant, and looking round saw a box containing a substance resembling butter. He asked for half-a-pound of the same and was then informed by the assistant that it was margarine. Witness said he would take it as such, and asked for the label, which could not be found. The margarine was divided into three portions, one being retained by the assistant, another by himself, while the third was forwarded to the county analyst. He had since received a result of this analysis, which certified the substance to contain 40 per cent. of foreign fat.

The defendant said the margarine was not exposed for sale. The box had been moved on one side to allow of the shelves to be scrubbed down, and it was just then that the inspector came in. He produced a box which he stated was the one in question. The label had become detached.

The Chairman asked, assuming such, why could not the label be found when asked for? Whether it was there or not it ought to be understood the Act required that it should be in such a position as to be seen by the customer.

A fine of 10s. and costs, together with the analyst's fee, was imposed, in all £1 8s. 6d.

At Wigan, on November 19th, John George Chantry, Newtown, was summoned for exposing margarine for sale and not having the article properly labelled.

Mr. Allen (Messrs. Peace and Ellis) prosecuted, and said that on October 25th Mr. Parkinson, an inspector of the Lancashire Agricultural Society, called at Mr. Chantry's shop. There were three dishes on the counter. On the first one there was the word "Margarine," but on the others there were no labels. He asked for three-quarters of a pound of the substance on the middle dish, which he was told was 10d. a lb. It was weighed out, but the shopman said it was a mixture. On analysis the substance was found to be margarine. The defendant was also summoned for wrapping up margarine in a paper which had not on it the word "margarine." In the first case defendant was fined £5 and costs, and in the second 20s. and costs.

Thomas Taylor, Pemberton, was summoned for exposing margarine for sale, and not having the requisite label in such a position as the public could see it.

Mr. Allen stated that in this case the word "margarine" was on the dish, but it was turned towards the shopman, and the public could not see it. Inspector Parkinson visited the shop on October 22nd, and bought three-quarters of a pound of a substance from the dish in question. The substance was 10d. per lb., and on it being analysed was found to be a mixture. Inspector Parkinson gave evidence, and stated that the person who served him told him it was a mixture during the operation of weighing it. Mr. J. Wilson defended, and suggested that nothing more than a technical offence had been committed. Such a mistake might be made by the most careful tradesman in the course of his business. He called evidence, but defendant was fined 20s. and costs.

R. Gore was summoned for a similar offence on October

22nd. Mr. Allen stated that the case was similar to the previous one. Inspector Parkinson visited the shop on the day in question, and bought some substance off a dish which had the requisite word "margarine" on, but the letters were turned towards the shopkeeper, and the public could not see them. Inspector Parkinson gave evidence. Mr. J. Wilson defended, and called his client and other witnesses, but a fine of 20s. and costs was imposed. For wrapping margarine in a paper which had not the requisite word on it defendant was fined a similar amount.

Frank Lennon, of Ashton, was summoned for exposing margarine on October 21st without the requisite label. Mr. Allen prosecuted, and Inspector Parkinson proved the case. Mr. W. Lees, junr., appeared for the defence. Defendant was fined 20s. and costs.

For a similar offence at Pemberton on the 25th ult., Elizabeth Peoples was fined 20s. and costs, and for wrapping margarine in a paper without the requisite notice on, was ordered to pay the costs.

James Hilton, for exposing margarine at Pemberton on October 25th without the requisite label, was fined 20s. and costs.

William Westhead, Nathan Makinson, and Joseph Dowling, for similar offences at Ince on October 19th, 20th, and 19th respectively, were each fined 20s. and costs.

BEFORE Sheriff Boyd at Glasgow on November 24th, Robert Middleton, grocer, 44, Maitland-street, was charged with exposing margarine for sale without the necessary label. As the fault lay with the shopman, the Sheriff dismissed Middleton with an admonition. James Proud, grocer, 529, Dalmarnock-road, pleaded guilty of exposing margarine for sale without the necessary label, and the Sheriff, remarking that it was a particularly bad case, fined him £10. Thomas Brannan, grocer, 38, Rose-street, South Side, was fined £2 for a similar offence.

At Northwich Sessions, Ellen Molyneux, grocer, Waterloo Road, and George Whitehead, grocer, Chester Road, were summoned for selling butter adulterated with 100 per cent. of margarine. The butter was purchased by a boy for Inspector Hind at 10d. per pound. It was not labelled in either case, nor was it wrapped in a margarine paper. Defendants were fined 35s. each.

At the Thames Police Court on November 25th, Mrs. Jane Loftus, of St. Paul's Road, Mile End, was summoned before Mr. Dickinson for selling margarine not labelled according to the Act. Mr. Milner Jutsum prosecuted on behalf of the vestry of Mile-End Old Town, and said on September 28th, Mr. Cox, sanitary inspector, entered the shop and asked for half-a-pound of butter, at the same time pointing to a tub which was labelled. After being served he asked for another half-pound from the adjoining tub, when the man said, "I can't serve you. That is margarine." Mr. Cox demanded the sample, and after some time he was allowed to have it. The analyst's certificate showed that the sample was entirely margarine. Mr. Cox, in reply to Mr. Bedford, who defended, said the first sample was analysed and found to be butter. The shopman did not tell him the second tub was margarine, and had been sold. There were no margarine labels exposed in the shop. He did not deny the sample was put in a paper wrapper, which, however, mysteriously disappeared while he was in the shop. In answer to the charge, Mr. Bedford submitted the margarine was not exposed for sale, and in support of his contention quoted the case of "Crane v. Lawrence." When butter was asked for butter was delivered. Mr. Dickinson, having heard the defendant had previously been fined, said he could not possibly believe the witnesses for the defence. The defendant would have to pay a fine of £5, and £2 4s. costs.

At the Lambeth Police Court on November 25th, H. Dunster, of Wyndham Road, Camberwell, was summoned by the Camberwell Vestry for selling butter not of the nature, substance, and quality of the article demanded by the purchaser. There was a second summons against the defendant for exposing margarine for sale without having

the same properly labelled. There were two summonses against Richard Morgan, of Great Suffolk Street, for similar offences. Mr. G. W. Marsden appeared in support of the summonses. Acting under the instructions of Mr. C. H. Kerslake, one of the sanitary inspectors in the service of the vestry, a young lady entered a shop in Wyndham Road, and purchased half-a-pound of 10d. butter. The sample was submitted to the public analyst, who certified it to contain 85 per cent. of margarine. At the time the butter was bought some margarine was purchased, and that, it was alleged, was taken from a parcel of margarine, which was not labelled as it should be. Dunster was seen in the shop at the time, but, on behalf of the vestry, Mr. Marsden sought to show that the real owner of the business was Mr. Morgan, and that Dunster was really his nominee. Mr. Morgan, however, declared that the business was sold to Dunster in 1894, and Mr. Dunster went into the witness-box and confirmed that statement, and produced some agreements relating to the sale. In the result the summonses against Mr. Morgan were dismissed, but Mr. Hopkins ordered Dunster to pay a fine of £5 and £2 2s. costs, upon each of the two summonses against him.

BEER AND PORTER.

At Southwark, on November 25th, Thomas John Knight, beerhouse keeper, 27, Clenham-street, St. George's, was summoned for diluting beer to the extent of 24 gallons per barrel of 36 gallons. Mr. Hawkins prosecuted for the Excise. Mr. Maitland, for the defendant, said the dilution was due to a careless use of "waste." The defendant was fined £15 and costs. William E. Vaile, of the Virginia Plant, 82, Great Dover-street, was similarly summoned for dilutions amounting to 34 gallons and 13 gallons per barrel. Mr. Maitland said the deficiency was due to the mixture of some stout with the porter, and called evidence to that effect. The same penalty of £15 and costs was imposed.

WHISKY.

At Milford Petty Sessions, James Williams, landlord of the Golden Lion Inn, Milford, was charged with selling whisky adulterated below the legal standard, on 7th September last. The case was adjourned from the 20th ult., and a full report of it appeared in the *Telegraph* on 27th ult. At the time the case was adjourned, the defendant was represented by Mr. W. J. Jones, solicitor, Haverford-west, but there was no appearance for defendant last Wednesday. When the case was previously heard, the defence urged that there was some doubt as to the samples sent forward for analysis; that a sample of the same whisky as was sold to Sergt. Brinn had been sent by defendant to Dr. Stephenson, of Guy's Hospital, who pronounced it of legal strength; and that, in any case, if the defence proved that the defendant sold the whisky as he received it from the wholesale dealer, the charges could not be sustained as against defendant. It was agreed, after much discussion, with the consent of both parties, that the sample in the possession of Sergt. Brinn should be forwarded to the analyst of Somerset House, and that the case should be adjourned until the result of his analysis was to hand. On the case being called,

The Clerk said that he had forwarded the sample as directed, and had received a certificate from the Government authority at Somerset House on the 4th inst. The certificate, which was read by the Chairman, declared that the whisky forwarded for analysis was 51 degrees under proof, being 26 degrees below the limit for whisky as permitted by law.

The Chairman said that Mr. Williams, the defendant, was not there that day. His advocate was there last court day. He had received a letter from Mr. Williams addressed to the chairman of petty sessions, which stated that: "Being unable to attend the court this afternoon, and having no

other defence to offer than Dr. Stephenson's analysis of the sample left with me by Sergeant Brinn, I respectfully leave the matter in the hands of the justices." The Chairman said that the defendant had also put in Dr. Stephenson's letter, and he, Dr. Stephenson, one of the first chemists in England that day, said: "I am of opinion that this is genuine whisky, of greater strength than the legal minimum, which is 25 degrees under proof." That was Dr. Stephenson's analysis. The public analyst had said that the sample sent him was 51 $\frac{3}{4}$, and the Somerset House analyst that the sample sent him was 51 degrees under proof. The magistrates were quite satisfied that the whisky that Sergt. Brinn took from the Golden Lion, and which he declared on oath was in his possession and safe custody from the time he took it until he handed it over to Mr. Price (the clerk), was the whisky he had got at the Golden Lion, and that it had not been interfered with or tampered with until handed over to the clerk. Were they (the magistrates) satisfied that Mr. Price sent off that whisky. (Laughter.) (To Sergt. Brinn): What is the difference between the analyses?

Sergt. Brinn: The public analyst says 51 $\frac{3}{4}$, and another says 51. Dr. Stephenson's is 25 under proof.

The Chairman: I do not think any chemist could be closer than that. Are the bench satisfied that the whisky taken by Sergt. Brinn is the same as the whisky sent to the two chemists?

Mr. Ll. Davies: Certainly.

The Chairman: Mr. Williams, at the last court, threw a doubt on our sergeant. There was a strong insinuation made that that whisky had been interfered with. There was a very strong insinuation made. (After consulting the Bench). The bench is divided. I agree with a fine of £3 and costs.

MEAT.

At Clerkenwell, on Nov. 24th, John Restorick, butcher, of Castle Hill, Axminster, was summoned before Mr. Bros, for depositing at the shop of Messrs. Corne Bros., 93, Cowcross Street, Smithfield, four quarters of beef and one bullock's head, which were unfit for the food of man. The prosecution was instituted by the Holborn District Board of Works, for whom Mr. Matthew Hale appeared. The defendant was represented by Mr. Young. The quarters were seized by Sanitary Inspector Billing outside the shop of Messrs. Corne Brothers on November 5th. They were portions of an old cow, and had been skillfully dressed and artfully winded so as to represent the portions of a young bullock. The animal had suffered from tuberculosis. The defence was that the meat was sent up for cats'-meat. The defendant gave 10s. for the animal. He had sent Messrs. Corne Bros. parcels before, but never anything but cats'-meat. Defendant sent good meat to London, and for four quarters of good meat he should have expected £14 to £16. For the meat in question he only expected 30s. at the most. Mr. Bros. said it would have been better if Restorick had sent the meat to the kennels. Such rubbish was not wanted in London. He would order the defendant to pay the costs only, amounting to £4 4s.

BAD MEAT IN BIRMINGHAM. — At the Birmingham Police Court, on November 26th, before Messrs. Wright and Sambridge, the Midland Stores, Limited, Jamaica Row, were summoned for exposing for sale two rolls of bacon which were unfit for food. Mr. Hiley, from the Town Clerk's office, appeared for the prosecution, and Mr. Hugo Young (instructed by Mr. Jaques) for the defence. Mr. Hiley stated that on the 3rd inst. Inspector Hothersall visited defendants' premises, and found two pieces of roll bacon ticketed 5d. a pound, and which on examination proved to be bad and unfit for food. The bacon was seized, and destroyed by the order of a magistrate. The defendants carried on business in a large way, and if the case was made out he was instructed to press for a heavy penalty. Inspector Hothersall gave evidence of the

seizure, and said that when the condition of the bacon was pointed out to the manager, he remarked that it was an oversight that it was placed in the window. Complaints had been made against defendants' shop on previous occasions. By Mr. Young: There was a large quantity of bacon in the shop, and the two pieces referred to in the charge were the only pieces seized. Dr. Hill said that he examined the bacon. It was in a state of decomposition and entirely unfit for food. It was slightly discoloured, and very offensive in smell. George Edward Clent, the manager, said that the firm dealt very largely in roll bacon, and exercised the greatest care to prevent anything harmful being sold. At times it was extremely difficult to detect bacon that was slightly tainted. John Arthur, provision dealer, Bordesley, and Edward Hodges, Six Ways Grocery Stores, were called to prove that roll bacon frequently went bad in a short time after being cut. It was stated that defendants had been twice previously fined, under the Food and Drugs Act. A fine of £10 and costs was imposed.

Allen Sharpe, 100, Great Hampton Street, butcher, was summoned for having on his premises a quantity of meat which was unfit for food. Mr. Hiley prosecuted. The offence was admitted. Inspector Wiltshire said that he visited defendant's shop on the 2nd inst., and saw a beeves' tongue and several pieces of beef hanging up. The meat was black in colour, and gave off an offensive smell. In all witness seized 26lb. of meat, which was condemned by the Medical Officer, and afterwards destroyed. Dr. Hill said that the meat was bad through being kept too long. Decomposition had set in, and the meat was unfit for food. A fine of £5 and costs was imposed.

ADULTERATION IN MONMOUTHSHIRE.

THE COUNTY ANALYST OF MONMOUTHSHIRE states that during the past quarter he has analysed eighty samples, including four lard, fourteen butter, one margarine, three coffee, three ground ginger, one ground cinnamon, and two pepper. In the case of the margarine the article was exposed for sale without a label, and contained 95 per cent. of foreign fat. The whole of the other articles above mentioned, remarks the analyst, "I passed as satisfactory, being for the most part of good quality. In three instances I found milk samples to contain boracic acid, also two samples of butter, but not to sufficient amount to warrant proceedings being taken. In the adjoining county of Glamorgan instructions have been given to the analyst to certify to adulteration when boracic acid or borax are found in either milk or butter; but in the absence of definite instructions from you I have not gone to this extreme, although making it a point to search for it in all such articles."

ADULTERATION IN BIRKENHEAD.

At Birkenhead police-court on Nov. 19th Mrs. Hannah Stevenson, of 67, Duke-street, Birkenhead, was summoned on eight different informations for selling adulterated coffee, for selling and exposing for sale as butter that which was margarine, and also for selling margarine which was not so labelled, and for exposing unlabelled margarine for sale. The Deputy Town-clerk (Mr. Fearnley) prosecuted, and the cases were proved by Chief Inspector Dawson. The coffee was found to contain sixty per cent. of chicory, and all the "butter" was margarine.—Mr. F. S. Moore, who defended, pleaded guilty, and urged negligence as extenuation of the offences, which, he said, were not deliberate. Defendant had been in the business for twenty-five years without any complaints having been made.—The Chairman said the maximum penalties in these cases amounted to £160. Under all the circumstances the bench thought the cases would be met by an inclusive penalty of £5.

ADULTERATION IN KENT.

DR. M. A. ADAMS reports that he has had 433 samples submitted to him during the past quarter, of which 415 consisted of various sorts of food. Of these 36 were found to be adulterated, the articles comprising 9 milk, 4 preserved peas, 3 butter, 2 arrowroot, and 1 each of coffee, mustard, pepper, arrowroot, and ginger. The three samples of butter referred to were obtained from the Dartford division, and were found to consist of mixtures containing respectively 80, 70, and 50 per cent. of foreign fat. A sample of olive oil from the Rochester division wholly consisted of cottonseed oil.

ADULTERATION IN CHESHIRE.

INTERESTING INVESTIGATIONS INTO JAM.

MR. CARTER BELL, the Analyst appointed for the County of Chester, reports that during the Quarter ending the 30th September, 1897:—

"I have analysed 221 Samples, consisting of 55 Milks, 41 Butters, 14 Spirits, 13 Jams, 10 Coffees, 6 Demerara Sugars, 5 Arrowroots, 5 Gingers, 6 Pickles, 4 Sweets, 2 Peppers, 2 Cheese, 1 Rectified Spirit, 1 Precipitated Sulphur, 1 Cornflour, 2 Oatmeals, 1 Castor Sugar, 3 'Mother's Friend,' 1 Borax, 1 Condensed Milk, 1 Spice, 1 Peas, and 45 Waters. Of these 7 were adulterated, viz., 2 Milks, 3 Spirits, and 2 Butters. It will be seen that the samples this Quarter have been very varied, which may perhaps account for the very low percentage of adulteration. The two adulterated Milks were, practically speaking, only one, as they came from one source,—a dealer in the Hyde Division. No. 1 Sample was taken by the Inspector in the ordinary way; this being found adulterated, the Inspector then went to the dealer who supplied the Milk. He obtained a Sample, and on analysis, it was found to be of the same composition as No. 1. He then went to the farm whence the Milk was obtained and had the cows (consisting of 10) milked in his presence. The farmer informed him that the dealer to whom he sold the milk insisted upon having the cows milked in two separate portions—No. 1 portion was the Milk from the cows three parts milked; No. 2 portion was the fourth part, which contained the chief portion of the Fat or Cream. When the Total Milk from the 10 cows was taken as a Standard, it made the above adulterated Samples to contain 8 per cent. of water, and robbed of nearly 25 per cent. of the cream. It is gratifying to see that out of the 55 Milks, really only one sample was adulterated. The two Butters contained 85 and 89 per cent. of Foreign Fat respectively. The 3 Spirits contained 3 and 6 per cent. of water in excess. Many of the above samples were not up to the highest standards of purity, thus, for instance, the Preserved Peas contained a trace of Copper. This I looked upon as accidental, as the Peas may have been prepared in a copper vessel. One Sample of Ginger was coated with about 1 per cent. of Carbonate of Lime, in fact, white-washed. This, I believe, is an old-fashioned custom in the Trade, as it is thought to preserve the Ginger from Insects. The Pickles were all free from Copper, but the Vinegar in which they were preserved was, in some cases, exceedingly weak. This I attributed not so much to adulteration, but to imperfect draining in taking the Pickles from the Brine. These slight departures from ordinary standards I look upon with a lenient eye, for I hardly think it is right to worry tradesmen with vexatious prosecutions such as one sees instances of from time to time recorded in the papers. The 3 Samples of 'Mother's Friend' were chiefly composed of Sugar, Rhubarb and other Medicinal compounds, flavoured with Aniseed. The Samples varied in composition, but they all contained a trace of Morphia. Evidently these preparations were used as Soothing Syrups.

"The 6 Samples of Demerara Sugar were pure cane, undyed Sugar, but I am not prepared to say that they came from Demerara.

"The 13 Samples of Jam were Strawberry, Black Currant, Apricot, and Marmalade. All these Jams contained Inverted Sugar or Glucose, and probably Glucose had been added in the place of Cane Sugar.

"In the manufacture of Jam on a large scale Glucose or Inverted Sugar is often used in the place of Cane. This I consider would be an adulteration if the Jams bore a label 'Prepared with Cane Sugar.' But to attempt to estimate this adulteration would be hopeless, for in the manufacture of Jam, the Acids of the Fruit convert the Cane Sugar, more or less, into Glucose. As a standard of comparison I had pure jam made under my own supervision, and in one case there was more Invert Sugar than in any of the other Samples. As I have spent a considerable amount of time, and taken no little trouble over this work, it will be interesting and valuable for future reference, if I give the Analysis. The first three Samples, which I give for comparison—Strawberry, Black Currant, and Plum—are absolutely pure, being home-made.

| NAME. | WATER. | GLUCOSE. | CANE SUGAR. | ASH. | | | |
|------------------|--------|----------|-------------|------|-------|-----|------|
| Black Currant... | 38.7 | ... | 54.34 | ... | 1.81 | ... | .696 |
| Strawberry | 39.8 | ... | 37.73 | ... | 9.88 | ... | .471 |
| Plum | 40.7 | ... | 31.25 | ... | 18.75 | ... | .287 |
| Black Currant... | 20.68 | ... | 39.06 | ... | 17.75 | ... | .26 |
| Do. do. | 14.0 | ... | 46.29 | ... | 17.81 | ... | .419 |
| Do. do. | 38.25 | ... | 29.76 | ... | 17.85 | ... | .42 |
| Do. do. | 18.88 | ... | 32.89 | ... | 24.25 | ... | .20 |
| Raspberry | 16.43 | ... | 35.71 | ... | 14.29 | ... | .312 |
| Do. | 29.0 | ... | 37.1 | ... | 13.07 | ... | .45 |
| Do. | 29.9 | ... | 33.33 | ... | 22.2 | ... | .38 |
| Marmalade | 20.5 | ... | 21.05 | ... | 37.77 | ... | .305 |
| Do. | 21.8 | ... | 15.62 | ... | 34.38 | ... | .31 |
| Do. | 22.5 | ... | 24.39 | ... | 25.61 | ... | .30 |
| Do. | 19.5 | ... | 21.73 | ... | 14.63 | ... | .26 |
| Apricot... | 23.0 | ... | 20.83 | ... | 19.17 | ... | .40 |
| Strawberry | 33.9 | ... | 35.24 | ... | 8.42 | ... | .15 |

DISCOLOURATION IN CANNED LOBSTERS.

SINCE May, 1896, Dr. Andrew McPhail, of the University of Bishops College, Montreal, has, says *The Grocers' Review*, been attempting, under the instructions of the Government, to improve the conditions of the lobster packing industry. The result of his labours is published in a Blue Book under the name of "Discolouration in Canned Lobsters." For a number of years grocers have forwarded frequent complaints to the lobster packers that customers were returning the tins as unfit for food, through an appearance of "blackening," "smut," or described as being "sour," "fermented," or of an "acid" flavour. The annual aggregate loss in this way has been variously estimated at from 600,000 to 900,000 dollars, and the causes of this destruction were well worthy of investigation by the Government. Dr. McPhail has made apparently a most complete and valuable report. The causes of the deterioration and the remedy proposed are of too technical a description to be successfully summarised. A method of canning is commended, which, it is alleged, will remove the difficulties previously met with. Fish canned under this new process have met with the approval of English importers. A prominent London firm makes this suggestion: "We should be glad to know if we should be able to print on our labels that lobsters packed under this new system would be guaranteed by the Canadian Government to be absolutely free from all obnoxious germs or poisonous matter of any kind, and we think if the system were advertised as a new one, backed up with this guarantee, it would remove a great deal of the prejudice which has been brought about through lobsters of indifferent qualities and also improperly processed having been sold. Before committing itself to any guarantee of this nature, remarks the journal from which we have quoted, the Government

should receive further assurance of the success of the new method, and arrange for an adequate system of inspection of the lobster factories and the operations of the packers

ADULTERATION OF SILK.

A WELL-KNOWN chemical cleaning and dyeing company at the West-end have been compelled, says the *Warehouseman*, to issue a circular on this subject. They say that they have had "great difficulty this season with many silk articles of dress, chiefly blouses, which have split or dropped into holes under the gentlest treatment," and they find it necessary to call the attention of ladies to the unfair extent to which adulteration is now carried on in silk manufacture. The facts as our readers know them are then stated, and the circular goes on to say: "Tens of thousands of blouses made of this adulterated silk have been sold in England in the season of 1897, which have not been worth one half the price paid for them." The company consequently announce that they can "accept no responsibility for defects in those weighted silks which appear after redyeing, wet and dry cleaning." We quite recognise the fact that it is the business of the manufacturer and the shopkeeper to supply what is wanted, and not what he thinks ought to be wanted; but in selling these heavily-weighted silks the tradesman does not supply what is wanted. If, for instance, the assistant were to say—"This is a very low-priced article, madam, and it is as good as you ought to expect for the money. It is really half tin, and after a little wear it will become brittle and tender, chiefly in the portions exposed to the sun's rays. The heat sets up a chemical action in the weighting substance, which in a short time rots the texture of the silk, causing it to split in the folds and drop into holes. It would even become tender from a short exposure in our window"—would the customer purchase the silk? We think not. She would say, "Thank you, I want something that will wear, and not rubbish such as you describe."

LITIGATION AS TO TRADE MARKS IN BAKING POWDER.

IN the Queen's Bench Division, Dublin, on November 24th, before the Lord Chief Justice, Mr. Justice O'Brien and Mr. Justice Boyd, judgment was given in the case of Wright, Crossley & Co., v. Dobbin & Co., which has been argued on a case stated by Mr. Hodder, R.M., Belfast. The defendants were summoned under Section 105 of the Trades Mark Act, 1883, for representing that the trade mark of a certain article manufactured by the Royal Baking Powder Company, New York, was "registered" in the United Kingdom, when in fact it was not so registered. The labels on the tins containing the baking powder sold by the defendants contained the word "Royal" in one corner, and the word "registered" in the other corner of one side of the label, while on the other side was printed a statement that it was manufactured by the Royal Baking Powder Company, of New York. It appeared that the Company had registered the trade mark in England, but that mark had been removed by Mr. Justice Romer, who held that they were not entitled to have it registered. Notice of this decision had been given to Dobbin & Co., but they having received an indemnity from the American Royal Baking Powder Company, continued to sell the article with the word "registered." Mr. Hodder had found that there was no offence committed.

The court now unanimously held that the magistrate was wrong, and sent the case back to Belfast, so that Mr. Hodder might deal with it according to law.

Counsel for the plaintiffs—Messrs. Ronan, Q.C., and Chambers (instructed by Messrs. L'Estrange & Brett). For the defendants—Messrs. Gordon, Q.C.; Meredith, Q.C.; and Denning (instructed by Messrs. W. M. Moore & Son).

A motion by the Royal Baking Powder Company was

also heard on November 24th, by the Vice-Chancellor, in which they sought an interlocutory injunction to restrain the defendants, Messrs. Young & Co., of Belfast, from using the word "Royal" in connection with baking powder other than the baking powder manufactured by the plaintiffs, who are an American company, who claim that in Ireland, at all events, they had established by user the right to the exclusive use of the word Royal as describing the baking powder manufactured by them. There had been considerable litigation, and it was still pending in England between Messrs. Wright, Crossley & Co., merchants, in Liverpool, who also claim the right to use the word "Royal" as a trade mark for their baking powder. When Messrs. Young were communicated with by the plaintiffs as to the use of the word "Royal," they apologised, not to the plaintiffs, but to Messrs. Wright & Crossley, and gave an undertaking to them not to sell baking powder with the word "Royal" on the labels, pending the litigation in England.

The Vice-Chancellor now refused the injunction, but reserved the question of costs until the hearing of the action.

THE ARTIFICIAL FEEDING OF INFANTS.

DR. WALFORD, Medical Officer of Health for Cardiff, in submitting his quarterly report, pointed out that the death-rate during the third quarter of the year was always greater owing to the infantile mortality caused by diarrhoea. The mean temperature had, doubtless, something to do with this, but a large proportion of the deaths occurred amongst children who were artificially fed, and as a matter of fact, children fed from the breast had seldom died from diarrhoea. The matter arose from the ignorance of mothers.

PRAISE FOR A SMART INSPECTOR.

THE Public Health Committee are going to ask the Islington Vestry to give to Sanitary Inspector Cowling an honorarium of £5 for his astuteness and the amount of his own spare time he spent in getting evidence to bring home the charge to the right man of the Welch butter gang who for so long sold margarine as butter. Inspector Cowling got them fined £90.

BATTERSEA VESTRY CENSURES THE CHIEF SANITARY INSPECTOR AND DISMISSES ANOTHER INSPECTOR.

THE principal business on November 24th at Battersea was the presentation of a report from a sub-committee which had had to inquire into alleged misconduct on the part of Mr. Freeman, a sanitary inspector, and incidentally certain charges were formulated against Mr. Overseer Whitehouse, a member of the vestry, and Mr. Young, chief sanitary inspector. The committee found that Mr. Freeman had been guilty of insobriety, and of unduly distributing cards to push the business of Mr. Whitehouse, who is a builder. It was stated, too, that he had been seen drinking with Mr. Whitehouse, and had not exercised proper vigilance over a job in which Mr. Whitehouse was engaged. Mr. Young was only shown to be guilty of improperly "screening" Mr. Freeman. Mr. Young had told the committee that he did not wish to injure Freeman, and was, moreover, somewhat in fear of the influence of such a "prominent member" as Mr. Whitehouse.

After a very lengthy debate, in which the opinion was very freely expressed that Mr. Whitehouse was more to blame than the inspectors, it was agreed by a large majority to call on Mr. Freeman to resign, by a narrow majority to censure Mr. Young, and by an overwhelming majority to censure Mr. Whitehouse, who made a long speech in his own defence, but did not, generally speaking, touch the findings of the committee.

It was stated that Mr. Whitehouse had resigned his secretaryship and membership of the Progressive party.

PARKE'S DRUG STORES AND ADULTERATION OF DRUGS.

At Lambeth Police Court William Mercer, of Electric Avenue, Brixton, was summoned by the Lambeth Vestry for selling, to the prejudice of the purchaser, a drug—viz., iodide of potassium—not of the nature, substance, and quality of the article demanded by the purchaser. Mr. T. Lightfoot, an inspector under the Food and Drugs Act, in the service of the vestry, said he went on the 5th Nov. to a chemist's shop in Electric Avenue, kept by Messrs. Parke, and asked to have a prescription made up. He gave it to the defendant, who was serving behind the counter, and he made it up. When told the article supplied would be analysed, the defendant said it was a solution, and added that if witness would give it back he would give him the proper stuff. Mr. Lightfoot produced the certificate of the Public Analyst, which showed that the quantity of iodide of potassium supplied consisted of 46 grains instead of 60 grains, as required by the prescription. Counsel for the defence argued that this was only a trumpery matter, and said the deficiency of 14 grains was only equal to 28 drops. For the defence, Mr. Joseph Gibson, a chemist, said that iodide of potassium, for the convenience of sale, was kept dissolved one part in two. If they were busy it was much easier to measure out the potassium in solution than to weigh it. In order to supply one drachm (60 grains), two drachms of solution would be given. An assistant might easily give 28 drops short in measuring out the quantity. Mr. Hopkins remarked that possibly a great deal might be said in mitigation in this particular case, but one must recognise how important it was that a doctor, in making out his prescription, should be able to rely upon his patient getting the strength, at all events, of the medicine he ordered. The defendant would be fined 40s. and costs.

ROTTEN EGGS FOR CONFECTIONERY.

At the Thames Police-court, on November 24th, Philip Abrahams, of White Horse Lane, Stepney, was summoned for having in his possession, for the preparation of food, 1,000 eggs, which were unsound and unfit for food.

Dr. F. Taylor, Medical Officer of Health for Mile-End Old Town, stated that on Tuesday, in company with Mr. Lyons, sanitary inspector, he visited the defendant's shop. At the back of the shop was a bakery, and just outside that he saw 1,645 eggs. He could see that some were bad, and from each parcel he got the defendant to break a certain number, all of which were bad. They were all decomposed and offensive. The witness asked the defendant what he was going to do with the eggs, and he replied that they were used for glazing the outsides of cakes. The witness then seized the whole lot, which he brought to the court and showed to the magistrate. He did not find one good egg. After that he went inside the bakehouse and saw a quantity of dough, and took about 1 lb. out. That portion was sent to the analyst, and the witness on examining the dough found that it was offensive and smelt of rotten eggs. In his opinion the eggs were unsound, unwholesome, and unfit for the food of man. It would be injurious to eat them. In the shop were cakes of all kinds. If the eggs were used only for glazing it would still be injurious, although not to such a great extent. The witness afterwards went back to the shop and asked the defendant what he had done with the dough. He replied that it had been made into cakes, baked, and given to the travellers. The witness brought away three of the cakes.

Mr. Lyons, sanitary inspector, added that he had kept the bakehouse under observation for some time. The defendant showed him an invoice showing that he paid 1s. 6d. a hundred for the eggs. The public analyst noticed that the dough was very bad.

In answer to the charge the defendant said that some of the eggs were sent on approval. The bad ones he sent back. For good eggs he paid 2s. 6d., 2s., and 1s. 6d. a hundred.

Mr. Mead: Were all the eggs new laid? (Laughter.)

The Defendant: Yes; but some are mixed in, and the smell from the bad eggs in the yard entered the bakery, and that caused the dough to smell. (Laughter.) He lived on the pastry.

Mr. Mead said that the offence was a very bad one, and worse than selling bad fruit, for the defendant was so able to disguise the pastry that the public were deceived. They believed that they were purchasing wholesome food, whereas they were buying what was almost poison. He must punish the defendant severely so as to teach him and others they could not play tricks on the public. The defendant would be sentenced to 21 days' imprisonment with hard labour.

THE SURREPTITIOUS DRUGGING OF FOODS.

A DEPUTATION from the Cardiff Grocers and Provision Dealers' Association waited upon the Health Committee asking them not to take any prosecutions under the Food and Drugs' Act, for the use of boracic acid in butter until the great uncertainty as to whether the chemical was deleterious to health had been definitely settled by a typical test case. Mr. George David who introduced the deputation, said boracic acid was now largely used as a preservative in imported butters. Prosecutions in the immediate neighbourhood for its use had in some instances failed, showing there was a grave doubt among experts as to whether it was injurious to health. Mr. R. Benjamin, a member of the deputation, said the acid had now almost entirely superseded salt as a butter preservative, owing to its being so much more palatable. Mr. A. Williams, representing a firm of wholesale butter importers, said he was informed by butter manufacturers that it was absolutely impossible to preserve the article for even seven days with the small amount of salt now used. The same acid was now used in curing meats of all descriptions, particularly American hams, and the law took no exception to it being used in this way. Half of the butter imported into South Wales was treated, he believed, with boracic acid. Mr. Parr said the acid was at least not an adulteration in the sense of adding to the weight of the article. Mr. David, in reply to the committee, said there had been a conviction for the use of the acid in that neighbourhood, but in that case the quantity of acid used was excessive. The question was one upon which medical men were by no means agreed. The committee decided to institute no proceedings until the question had been fully reported upon by the medical officer. The deputation having left, Councillor Allen observed that the danger of giving the grocers a free hand in this matter would be that it might lead to an excessive proportion of the acid being used. Dr. Walford, the medical officer, remarked that the whole question turned upon the quantity of acid used. Dr. Buist: It would require a very large quantity to be injurious. The matter was then dropped, it being understood that the medical officer would submit his report to the committee at its next meeting.

ANALYSTS AT VARIANCE.

At Liverpool, on Nov. 24th, John Noble, milk dealer, of Freeland Street, was summoned for having sold as new milk which was alleged by the analyst, Dr. Campbell Brown, to contain only 2.61 per cent. of fat and to have been deprived of part of its cream. Defendant said that he felt so certain that the milk had not been tampered with that he had taken the sample left with him to Dr. G. Watson Gray, who had arrived at a different result, and had certified that the milk contained 2.95 per cent. of cream. Mr. Stewart said that the inspector took two samples of milk away with him, and asked the defendant whether he would like one of them sent to Somerset House for analysis. Defendant: Most certainly, if you will allow me that privilege. The case was then adjourned twenty-one days to permit this to be done.

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Food and Sanitation.

SATURDAY, DECEMBER 11TH, 1897.

THE DANGERS OF COCA WINES.

DR. SNOW, of Bournemouth, in his presidential address to the British Balneological Society, spoke of the increase of intemperance amongst invalids from the enormous consumption of coca wine. "It is a subject to which we have frequently called attention," says *The British Medical Journal*. The evil, however, is by no means confined to invalids and convalescents, but pervades all classes of society, women and children being the chief victims. The term "coca wine" has no definite meaning, that is to say, there is no official formula for its preparation. Some kinds are made from the coca leaves themselves, others from the liquid extract of coca of the British or United States *Pharmacopœias*, whilst another variety is not made

from coca at all, but from hydrochlorate of cocaine. In every case, however, the basis is a strongly alcoholic wine. In one specimen the wine was evidently of Spanish origin, and of the quality usually sold retail in London at from 1s. to 1s. 3d. a bottle. It probably contained from 18 to 20 per cent. of alcohol, and was clearly not of a character to be taken with impunity by, say, a girl at school at 11 o'clock in the morning. A chemist was recently summoned at the instance of the Inland Revenue authorities for selling coca wine without a licence. It was stated in evidence that on analysis the wine was found to contain 29.2 per cent. proof spirit. The magistrate pointed out that it was bought from chemists by women who had given way to drink, and that it was extensively used for that purpose. He imposed a fine of £5, with costs. In an American work on pharmacy we are told that the best coca wine is made by adding an ounce of fluid extract of erythroxyton, an ounce of alcohol, and an ounce of sugar to 14 ounces of claret, but it is significantly added that "in place of claret any other palatable wine may be used, according to the demand or preference of the prescriber or customer." The dangers of preparations of this description are obvious. The patient not only acquires a liking for alcohol—which is presented in its most seductive form—but soon falls a victim to what Erlenmeyer calls the third scourge of humanity—the coca habit. The first effects are slight, and are probably overlooked, but continual indulgence creates a craving, which the victim seeks to satisfy at all risks. The ordinary alcoholic stimulants are no longer found sufficient, and coca wine is taken in addition. The sufferer from cocaineism soon becomes nervous, tremulous, sleepless, and without appetite, and finally drifts into a condition of pitiable neurasthenia. It is surprising that in recent works on pharmacology and medicine no reference is made to this condition, the only exception being in the case of the fourth edition of the late Dr. Milner Fothergill's *Practitioner's Handbook of Treatment*, where the following statement occurs: "Coca wine and other medicated wines are largely sold to people who are considered and consider themselves to be total abstainers. It is not uncommon to hear the mother of a family say, 'I never allow my girls to touch stimulants of any kind, but I give them each a glass of coca wine at eleven in the morning, and again at bedtime.' Originally coca wine was made from coca leaves, but it is now commonly a solution of the alkaloid in a sweet and strongly alcoholic wine." This is really the gist of the whole matter; coca wine is largely consumed by people who fondly believe themselves to be total abstainers, and who are active enough in denouncing those who take a little wine or a glass of beer at their meals. The sooner their delusion is dispelled the better for themselves and for the unfortunate children over whom they exercise supervision.

THE SANITARY DISPOSITION OF GARBAGE.

By FRANK DONALDSON, M.D.

(Of New York; Member of Commissioner Waring's Special Staff).

No measure in the sanitation of a city is more fruitful of beneficial results than that embodied in the proper care of the streets and in the sanitary disposition of garbage. In a great city the removal of ashes, paper, and similar waste products is a comparatively simple matter, but the final disposition of garbage is not the least important and troublesome task of the Department of Street Cleaning. In sea-port towns it is customary to tow the mixed wastes to sea and dump them far from shore. This was the method employed in New York until about one year ago, and theoretically, with the strong tides which prevail in the vicinity of the entrance to the harbour, it should have been entirely satisfactory. Such, however, was not the case, the shores of Long Island being continually strewn with a mass of putrifying rubbish, a constant menace to public health. While this practice proved efficient as far as the city itself was concerned, it rendered sea-shore resorts comparatively

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uninhabitable during the summer months. Moreover, the absolute loss of whatever valuable products the garbage was capable of producing, when subjected to proper treatment, violated all laws of economy. These considerations led to the establishment of crematories or reduction-plants, not only for New York but for other cities, notably Philadelphia. Early attempts to get rid of garbage and at the same time to derive benefit from its destruction were defective, but the evolution of the process and final triumph was worked out by the authorities of New York City, and it furnishes an interesting and instructive lesson.

The first efforts in this direction resulted in the building of an ordinary furnace, a long brick affair with provision at the top for dumping in whole cartloads of rubbish, and an arrangement for maintaining a fire. Many noxious fumes were driven off by this process, and a second fire was maintained near the entrance to the chimney or smokestack, through which all the fumes passed, and were largely decomposed and destroyed. Such furnaces simply destroyed the waste, and to that extent were satisfactory; but in order to extract products of commercial value from the garbage elaborate modifications were necessary. The process, as now conducted at Barren Island, will perhaps be best understood by following the garbage in the various processes to which it is submitted. The garbage, separated from ashes, paper, tin-cans, and such waste material, is collected daily from each house in the city. The garbage-carts make their rounds on schedule time, and each householder sets out the garbage-can on the sidewalk, as nearly as possible, at the time the cart is expected. The scows promptly receive the contents of the carts at the dumping-stations. Thus, the average exposure of the garbage is eighteen to twenty-four hours, this time being necessary for loading a scow. Six hours are required to unload a scow, after which it is cleaned and disinfected before returning for another load. The average daily amount of garbage reduced during September was nearly six hundred tons, which is considerably less than the daily capacity of the reduction-plant. The receptacles are kept as clean as possible, their contents are dumped into carts and conveyed to scows moored at convenient dumping-places along the water-front, and these are towed by steam-tugs a distance of ten miles to the reduction-plant at Barren Island, on the southern shore of Long Island. Here the contents of the garbage-boats are carried by machinery up an inclined plane to the top of one of the buildings and dropped through chutes directly into perpendicular cooking-tanks, or digesters, about fifteen feet long and five feet in diameter. These number forty-eight, and are steam tight. The garbage is cooked by steam, which is forced through pipes opening into the bottom of the digestors. This process is continued five hours, at a temperature of about 300 deg. F. This not only disintegrates, but completely sterilizes the contents of the tanks.

The cooking being completed, the mash is emptied into sheet-iron receiving-tanks, from which it is received into bags about thirty inches square. The filled bags then are

placed in presses. The presses are sufficiently large to receive nine of these bags, one above the other, with appropriate slats between. Gradual pressure is applied, and the liquid, as it is forced out, runs into a tank, and the grease contained therein, as it rises to the top, is removed and placed in barrels for transportation. This grease is used largely for wheel lubrication, but some of it is refined and finds its way into other channels. The dark liquid remaining was formerly allowed to escape into the ocean, but it is now passed through a series of condensers, the final product being a substance rich in ammonia and phosphates. There remains a chemically pure and odourless water which is discharged into the bay. The solid material is then conveyed to the drying-house and placed in a masticating-machine, after which it is taken to the dryers, which are horizontal, steam-jacketed cylinders sixteen feet long, containing revolving shafts with arms. This drying operation continues from three to five hours, and when the mass, which is called tankage, has been sufficiently reduced, it is conveyed to the storage-floor, where it is put into bags for use as fertilizers. This fertilizer-filler formerly came from the dryers as very fine powder, and had a distinct odour; but recent improvements have been made, and the filler now comes out in the form of coarse grains. In this the odour is less, and there is no possibility of its being carried by the wind.

The relation of such a factory to the health of the community in which it is located is naturally determined by the cleanliness of the building and machinery, the condition of the garbage-water, and the manner in which it is disposed of, and the character and amount of odour which escapes. The sanitary condition of the building and machinery is such that little more odour is noticeable than that naturally arising from a large kitchen. This is accomplished by preventing the escape of the unpleasant gases which result from the cooking process. These gases are drawn through condensers, and, after being chemically washed, are discharged into the bay diluted with from 50 to 100 times their volume of salt water. The grease is conveyed through closed pipes and promptly barreled, and the dark, foul-smelling liquid from which it is drawn off is in its turn condensed, and finally escapes as a chemically pure, limpid water. Moreover, it has been demonstrated by this plant that as a mercantile enterprise the results are most satisfactory.

In making these assertions regarding the absence of objections to the presence in a neighbourhood of a reduction-plant, like the one described, the writer is cognisant of the fact that many complaints have been made about the odours which at times annoy the inhabitants of the shores of Long Island, and which have been, and still are, attributed to the reduction-plant. Undoubtedly, as the plant was originally set, much of the odour complained of came from the cooking garbage, but the method as conducted to-day is practically free from these charges. When we consider what a menace to public health putrifying garbage in the streets and alleyways of a large city and along the neighbouring shores is, the great importance of its prompt collection and sanitary disposition can hardly be exaggerated. At the present time the question of garbage disposition seems to be satisfactorily answered by the success of the Barren-Island plant.

It is a significant fact that during the past summer the death-rate in the city of New York has been less than at any time in its history. No one would affirm that the clean streets and prompt disposition of the garbage has been the only factor in producing this result, but undoubtedly it claims its fair share of credit. The Commissioner of Street Cleaning, in a recent article, declares that the improved methods of disposing of garbage has contributed largely to the reduced death-rate. The average death-rate from 1882 to 1894 was 26.78 per thousand; during 1895, 23.10; during 1896, 21.52; and during the first half of the year 1897, 19.63. He further calls attention to the important fact that if the latter figure is maintained throughout the year, there will have been 15,000 fewer deaths than there would have been had the average death-rate of the thirteen previous years been maintained.

THE WATER AT SPIRIT PRICE GAME.

LICENSES TO BE LOOKED TO.

AT Totnes, before the Mayor (Mr. B. W. Hayman), and Messrs. W. M. Tollit, R. E. Bourne, and F. T. Tucker, on Dec. 1st, Fredk. W. Brown was summoned for selling a pint of brandy 30 degrees below proof at the Dartmouth Inn, Totnes, on October 23rd, contrary to the provisions of the Food and Drugs Act. Mr. F. Kellock appeared for defendant.—Supt. Ryall stated that on October 23rd he called at the Dartmouth Inn and asked for a pint of brandy, for which he was charged 2s. 4d. He then informed defendant he intended to submit a sample to the county analyst, whose certificate eventually showed that the brandy was adulterated with water, and was 30 degrees below proof. In cross-examination witness said he was shown into a room behind the bar. He saw no notice that spirits were sold as diluted, and no alcoholic strength was guaranteed. Defendant did not call attention to that fact in his wife's presence, and say, "That notice protects me."—P.S. Webber, who served the summons, said defendant seemed surprised, and stated, when the superintendent purchased the brandy he had none in the keg, and took it from the jar and adulterated it himself with the usual quantity of water. Defendant took witness into a room behind the bar and showed him the notice.—Mr. Kellock contended that brandy could be sold as pure at 25 per cent. below proof, as there was no offence unless the sale was prejudicial to the consumer. He quoted the case of *Morris v. Johnson*, decided by Justice Mathew, which showed that where a notice of dilution was exhibited the purchaser was bound by it. The notices had been exhibited in the house for the past eight years, and everyone who entered knew defendant did not sell pure spirit unless the proper price was paid, that paid by the superintendent not being for pure brandy. That sold was known as British brandy, and if the best had been asked for it would probably have been supplied above full strength. Defendant carried on the business as he was entitled to do.—The Deputy Magistrates' Clerk (Mr. E. Windeatt) said the justices at Torquay had refused to renew licences where such notices were exhibited.—Mr. Kellock said they had never been questioned in that Court.—Supt. Ryall said they would be next licensing day.—The Deputy Clerk said that on the case quoted by Mr. Kellock being sent back to the magistrates they held that the purchaser did not know the spirit was diluted and convicted.—Fredk. Wm. Brown, defendant, said he had been tenant of the Dartmouth Inn for years, and there had always been the notices in question exhibited, one being in the room where the superintendent was served, and another in the bar. He called the attention of the superintendent to the notice, and again when he told him the price pointed to the notice, and said "This protects me."—In reply to Supt. Ryall, defendant said he pointed to the notice, and the superintendent made no reply.—Evidence was about to be called that the notices were continually exhibited, but the Deputy Magistrates' Clerk said the whole question was whether Mr. Brown called the attention of Supt. Ryall to it.—Mrs. Brown said her husband pointed out the notice to the superintendent, and asked if that protected him.—Supt. Ryall said he was in the room for five minutes, and looked round it carefully, and would swear there was no notice there and his attention was not called to it.—The Mayor said the Bench had carefully considered the case, and thought the evidence sufficient to convict. Defendant would be fined 10s. and 11s. 6d. costs. The notices would be taken into account on the next licensing day, and the Bench directed the police to notify the innkeepers to that effect.

AT Chesterfield, James Henry Thomas was summoned by Mr. A. W. Shortt, that by the hands of Ruth Thomas selling to Robert Tomlinson to the prejudice of Francis Shortt, at Stonegravels, on October 21st, gin at 25 per cent. under proof, 88 parts, excess of water, 12 parts, the alcoholic strength being 43 per cent. under proof, and not of the nature, etc., demanded. Mr. Middleton prosecuted,

and said that the defendant kept the Crown and Cushion Inn, Stonegravels. Robert Tomlinson called at the house, and asked for half-a-pint of gin. He was supplied, and afterwards when the defendant's wife was told that it was for the purpose of analysis, she called the man's attention to a label stuck up in one of the rooms of the house to the effect that all spirits sold in the house were diluted. That was no defence whatever, as the attention of the purchaser should be called to the bill on purchasing, and not afterwards. The defendant's wife appeared and pleaded guilty, and said they had not been used to selling spirits, having only kept a beerhouse previously. Fined 10s. and costs.

AT Grimsby, on November 30th, William Sims, innkeeper, of North Cotes, was summoned under the Food and Drugs Act, 1875, with selling an article of food, to wit, brandy, which was adulterated with twenty-eight per cent. of water, and was not of the nature, substance, and quality demanded by the purchaser.—Mr. Bloomer defended, and said that his client admitted having committed a technical offence.—Supt. Stennett produced the certificate of the public analyst, and said that, although the adulteration was very small, he did not feel justified in withdrawing the case on payment of costs, because the prosecution, taken up by the Lindsey County Council, was attended with great expense. He would be satisfied with a small fine, and he suggested that the Bench should take that course.—Mr. Bloomer, in defence, stated that Sims had been an old man-o'-war's man, having served in the navy for more than twenty-six years. That was absolutely the first summons or charge brought against him, and he hoped their Worships would take that into consideration. He would also like to point out that on leaving the navy defendant was given excellent characters, and was awarded a medal for long service and good conduct, a medal that was only granted to men of exceptional merit. As to the offence in question he might inform the Bench that when defendant took over the business in April last, a bottle of brandy was included in the inventory, and the whole of the brandy he had ever sold, or had in his possession was taken out of this small bottle. Very often he sold 2d. or 3d. worth of brandy, and after he served it he had not always put down the cork very tightly. That would account for the slight adulteration, for the brandy only contained 2 per cent. more than was allowed by law. The man himself had not adulterated the brandy, and he therefore asked the Bench to allow him to meet the case by paying the costs.—The Magistrates thought the offence was quite accidental, and expressed the opinion that the prosecution ought to be satisfied with defendant paying the costs.—Supt. Stennett said he was in their Worships' hands, but he had no authority from the County Council to withdraw the case on payment of costs.—Defendant was ordered to pay 3s. 6d., the costs of the case.

AT Liskeard on December 1st, Henry Knight, landlord of the Ship Inn, Polperro, was summoned for selling whisky 4°19 degrees under standard. Superintendent Philp proved purchasing 1½ pint of the spirit from the defendant on October 25th, and the report of the analyst (Mr. Kitto) stated that it had been lowered to 29°19 degrees under proof by the addition of water. Mr. Borlase Childs, for defendant, pleaded that the spirit had deteriorated by keeping. Defendant stated that the barrel from which the sample was drawn contained 9½ gallons, and had nearly run out. It was quite possible for spirits to deteriorate by evaporation when exposed to the air, and he had not added more water than allowed by law. Fined £1 and costs.

FISH.

AT Chorley, on November 30th, William Holbrook was summoned for exposing diseased fish for sale on Friday, October 29th. From the evidence given by Inspector Cunliffe and other witnesses, it appeared that on the date named the defendant had the fish on a cart in Standish Street, and, on being examined by Drs. Fish and Young, they were found to be unfit for human food. The defence

was that Holbrook was not aware that the fish were unsound, and that he had purchased them from a dealer of repute in Wigan. The defendant had been forty-six times before the Bench. The magistrate said the defendant might have scattered disease up and down the town through selling the fish. He was liable to a fine of £4,500. They were not going to impose any such penalty—(laughter)—but the defendant would have to go to gaol for two months. It appears that there were 243 pieces of fish on the cart, and the defendant was liable to a fine of £20 for every fish.

LORIMER'S QUININE WINE CASE.—NO APPEAL.

THE clerk at Swindon Petty Sessions, on December 2nd, announced that Mr. Withy did not intend to appeal against the convictions of Messrs. Rogers and Williams, of New Swindon, for selling quinine wine not of the quality demanded. The Chairman: Yes, well, I didn't suppose he would. The convictions were, therefore, ordered to stand.

MEAT.

At Guildhall, London, on December 1st, Joseph William Cook, farmer, of Kirton-in-Lindsay, Lincoln, was summoned before Mr. Alderman Pound for sending the carcass of a diseased sheep to the Central Meat Market, intending it for sale as human food. Mr. Vickery prosecuted on behalf of the Commissioners of Sewers, and Mr. Walter Beard defended. Dr. W. Sedgwick Saunders (medical officer of health) stated that the carcass was submitted to him by the inspector who seized it. It was in an emaciated and wasted condition, was dropsical, and he described it as a filthy mass of unsound meat. He thought the animal had suffered from some parasitic disease. The eating of such stuff would be injurious to the consumer. A groom in the defendant's service said that he killed the sheep by the defendant's direction. He considered it quite sound, though a bit thin. He knew that it had lost the use of its limbs, and thought that was why it was killed. The foreman of the farm eat the head and pluck. The defence was that the meat must have changed its character from good to bad in transit. Mr. Alderman Pound imposed a fine of £25 and £6 6s. costs.

At Guildhall, on December 2nd, John Cutting, farmer, of Otley, Suffolk, was summoned before Mr. Alderman Halse, for sending to the Central Meat Market the carcass of a pig that was diseased and unfit for human food. Mr. Vickery prosecuted on behalf of the Commissioners of Sewers. It appeared that when the carcass was seized in the meat-market on the 3rd of November it was wet and wasted. When the condemnation note was served upon the defendant he stated that the pig choked. He did not believe the meat was bad. He had thousands of pigs killed, and knew something about them. The alderman remarked that this meat was very bad, and he was satisfied

that the defendant knew it. He would impose the full penalty of £50 and £5 5s. costs, or three months' imprisonment.—Ernest William Henry Adams, described as a pig killer, of Little Bealings, near Woodbridge, Suffolk, was summoned for sending three diseased pigs to the Central Meat Market. The inspector who seized the meat said the carcasses were wet and wasted, and there was an entire absence of fat round the kidneys, which were black and much enlarged. The weight was 91 lb. It ought to have been about 168 lb. It was shown that the defendant, who was until recently a labourer, only dealt in pigs in a small way. The alderman fined him £10 for each carcass—£30 in all—or a month with hard labour.

At Bury, on Dec. 2nd, John Moran, Rawsthorne-street, Bolton, was summoned for exposing three rabbits for sale intended for food which were unwholesome and unfit for food, at Ramsbottom, and John Edmondson, butcher, Moorgate, Bury, was similarly summoned in respect of 21 lbs. of meat. The magistrates considered the case against Edmondson a very bad one, and fined the defendant £10 and costs. Moran was fined £1 and costs.

MARGARINE.

At Faversham, on Dec. 1st, John Lambkin, grocer, was summoned for selling adulterated butter. The sample was certified to contain 63 per cent. of foreign fat. Defendant pleaded that he was only in a small way of business, and bought the butter from a local grocer. He was under the impression that what he was selling was pure butter. The Bench imposed a fine of 2s. 6d. and costs.

At Clerkenwell, on Dec. 2nd, Richard Lewis, of 107, Kingsland-road, Upper Holloway, was summoned for delivering margarine to a purchaser otherwise than with a printed wrapper, and with exposing margarine for sale without having it labelled according to the Act. A fine of 48s., and 14s. 6d. was imposed.

At Manchester, on Dec. 1st, Annie Baker, Clarendon-street, Hulme, was fined £10 and costs for selling margarine as butter. Robert Jones, Higher Cambridge-street, for selling margarine unlabelled, was fined 20s. and costs.

MILK.

At Clerkenwell, on Dec. 2nd, Sarah Tubbs, of 38, Orpingley-road, Hornsey-road, was summoned for selling milk, on 13th October, containing 6 per cent. of added water. The defendant said she sold the milk as she purchased it. Mr. Bros ordered her to pay 12s. 6d. costs.

Gabriel Gyre, of 54, Campbell-road, Seven Sisters'-road, was summoned for selling on 13th October, milk that was adulterated with 13 per cent. added water. Fined 10s., and 12s. 6d. costs.

Hannah Blagdon, of 105, Fonthill-road, Seven Sisters'-road, was summoned for selling milk that was adulterated with 6 per cent. added water. Fined 10s., and 2s. 6d. costs.

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DRUGS.

At Belper Petty Sessions, on Dec. 2nd, Henry Fletcher, of the Butts, Belper, shop-keeper, was summoned, at the instance of Captain Sandys, the County Inspector under the Food and Drugs Act, for selling 1s. worth of lobelia, not of the nature and substance demanded. The inspector said there was no spirit in the article. Defendant admitted he made a mistake, and was fined 10s. and costs.

At Chesterfield, Aaron Cutts was summoned by Mr. W. A. Shortt, that by the hands of Kate Cutts selling to Robert Tomlinson, to the prejudice of Francis Shortt, at Brimington, on October 14th, tincture of rhubarb which was deficient of ten per cent. proof spirit and 33 per cent. of its solid ingredients and devoid of saffron, and was not of the nature, &c., demanded. Mr. F. A. Walker, Chesterfield, defended. Colonel Shortt, inspector of foods and drugs, said that the tincture of rhubarb sold in this instance was practically worthless. Robert Tomlinson said he went to defendant's shop at Brimington, and asked for six ounces of tincture of rhubarb. The wife of the defendant served him with the article which he handed to Mr. Shortt. By Mr. Walker: She did not say the rhubarb had been in stock a long time. Mr. Shortt corroborated Tomlinson's statement. In answer to Mr. Walker, Tomlinson said he heard the defendant's wife say the tincture of rhubarb had been in stock some time. Mr. J. White, county analyst, said the tincture of rhubarb sent to him for analysis contained one-third less solid matter than it should have done and there was 10 per cent. deficiency of proof spirit. By Mr. Walker: The proof spirit might have evaporated owing to the time it had been kept, but this could not account for the deficiency of solid matter. The medicinal qualities would be diminished one-third by the loss of the solid matter. Mr. Walker pleaded guilty to a technical offence. When the defendant's wife sold the article she did not know that it was not of a right quality. He asked that a nominal fine of 1s. be inflicted on this account. Defendant was fined 5s. and costs.

VINEGAR PROSECUTIONS.

At the Bristol Police-court, on Nov. 29th (before Mr. Charles Townsend and Mr. J. W. Arrowsmith), Walter James Andow, of 18, Millpond-street, was summoned, under the Food and Drugs Act, for selling as vinegar what was not vinegar, but a compound of 99.49 diluted acetic acid, and 0.51 of colouring matter. Mr. E. J. Taylor prosecuted, and stated that on October 28th the inspector visited the defendant's shop, and was served by Mrs. Andow with a pint of vinegar, for which he paid a penny. He submitted a portion of it—the pint having been divided and half of it given to the defendant—to the public analyst, who had returned a certificate to the effect that the sample was composed of diluted acetic acid and colouring matter, and was not vinegar at all. Frederick William Simpson, the inspector, gave evidence as to purchasing the sample, and, in cross-examination by Mr. H. R. Wansbrough, who defended, he said it was the price of the vinegar that attracted his attention. He did not see how they could sell good malt vinegar at the price, and he expected to get some adulteration. He had never said to Mrs. Andow, "I bought it as wood vinegar." Mr. Wansbrough submitted that there was no case against the defendant. The clause of the Act under which the proceedings were taken referred to "any person who shall sell to the prejudice of the purchaser." How could it be said that the sample had been sold to the prejudice of the purchaser when the purchaser said that he did not expect to get good malt vinegar at the price, but some other decoction? He had got what he expected to get. The Bench, on this point, decided that the purchaser had been prejudiced. Mr. Wansbrough proceeded to say that Mrs. Andow had bought of the manufacturer, Mr. Parfitt, a nine-gallon cask of this "wood" vinegar, and, if the label had been shown, no offence would have been committed. The Bench reserved their decision in this case till after the hearing of the next case, in which James Parfitt, of 270, Newfound-

land-road, was summoned for a similar offence. Mr. Taylor prosecuted, and said that the defendant sold this wood spirit wholesale to the small retailers. A witness named Holt stated that she bought a gallon of vinegar at the defendant's premises for 7d. She was served by a lad, and was asked whether she would have plain or spiced vinegar, and she asked for plain. The inspector produced the public analyst's certificate, which showed that the sample was similarly constituted to that mentioned in the other case, and was entirely devoid of vinegar. Mr. Wansbrough said that Mr. Parfitt, when sending out his vinegar, which was known as distilled wood vinegar, labelled his cask accordingly. It was not right that a person should enter the wholesale premises and purchase a gallon of a lad, and institute proceedings thereupon. Mr. Parfitt was called, and stated that he had been in the business 12 years, and manufactured no other kind of vinegar. It was used for the table and for pickling purposes. No one on his premises had authority to sell a gallon of the vinegar to the witness Holt. The Bench thought that it was quite necessary, when an article of this character was sold, that the purchaser should know what he was purchasing. There was no doubt a large consumption of this article in the poor parts of the city, and it was the duty of the vendor to see that the purchaser knew that he was not purchasing vinegar. In the first case, therefore, they should impose a penalty of 10s. and costs. In Mr. Parfitt's case, as the lad who sold the article was not duly authorised, although Mr. Parfitt was responsible for the management of his business, they should dismiss the case on payment of costs.

ORANGE QUININE WINE.

At Swindon, on Nov. 29th, Edward Rogers and Arthur Davis Williams, grocers, of New Swindon, were summoned, at the instance of Sam Smith, County Council inspector, for selling orange quinine wine not of the nature and quality demanded. Mr. H. Bevir prosecuted, and Mr. A. E. Withy defended. The evidence of the inspector and the analyst showed that the samples sent to the county analyst contained only 2.2 per cent. of alcohol and not less than 75 grains per gallon of salicylic acid. This acid, which is a well-known antiseptic, was introduced into the mixture because of the omission of a proper percentage of alcohol. It would not "keep" unless alcohol was there, and so the acid was put in to preserve it. After hearing a great deal of evidence the Bench convicted, and fined each defendant £1 and costs.

PURE BEER.

It would be interesting, says *The Morning Advertiser*, to know what has happened, or is happening, to the Beer Materials Committee. It was appointed by the Chancellor of the Exchequer in the summer of last year to inquire into the allegations made in support of the Pure Beer Bill which Mr. Cuthbert Quilter (as he then was) had introduced in March. The allegations made were of the kind to which the Trade is accustomed, and amounted to this, that if beer was not actually adulterated, it was brewed with so large a dependence on "malt adjuncts," "hop substitutes," and chemically treated materials as to be unwholesome. They were made by people who knew nothing whatever about brewing and very little, if anything, about beer; and the legislation asked for on the strength of them was thought by many of its supporters to be an ingenious device for protecting British agriculture. The Chancellor of the Exchequer promised a departmental committee, and in course of time appointed one "to inquire into and report upon the questions whether legislation is required to prevent the use of deleterious substances in the manufacture of beer, and whether the materials of which beer may be composed can be defined by law without undue interference with the liberty of brewers to use any wholesome materials in brewing." It would

naturally have been expected that those who had drawn up such a formidable indictment of the national beverage would have been prepared at least to produce some evidence in support of it, and that the first thing the committee would have heard would have been a full, true, and particular account of all the iniquities of modern brewing as conceived by them. Nothing of the kind has happened. The committee met on the 8th of October, 1896, and on the 12th began to take evidence. It took evidence on four days, the last being October 29th, and then adjourned. It met again on the 4th of February this year, and held eight sittings, the last being on the 6th of May. Since then it has done nothing whatever, and it is understood that it will not do anything until February next.

A QUEER HAM CASE.

IN the Summons Court, Belfast, on Dec. 1st, before Messrs. F. G. Hodder, R.M., James M'Cann, J.P., William Masterson, J.P., Joseph Macauley, J.P., and James Johnston, J.P., the following case, which excited much interest, was heard.

David M'Master, inspector of foods, etc., summoned Joseph M'Kibbin, 284, Shankhill-road, on the charge that, on the 29th of October, 1897, he had in his possession, and for sale, a quantity of meat—to wit, hams, pig joints or knobs, bacon cuttings, and butter, intended for food of man, when said hams, etc., were unsound, and unfit for human food, contrary to the provisions of the statute 41 and 42 Vic., chap. 52. This prosecution was brought before the Petty Sessions on the 29th October, when the articles mentioned were ordered to be destroyed. The contention for the defence was that the articles were fit for human food.

Mr. A. J. Lewis appeared for the prosecution, and Mr. T. Harrison, B.L. (instructed by Mr. A. M'Erlean), for the defence.

David M'Master, examined by Mr. Lewis, said he remembered the 29th October. On that day he entered Mr. M'Kibbin's shop, and saw four hams on a barrel lid about a yard from the counter on the shop floor. The hams seemed to be in a putrid and rotten state. He saw maggots on them. He saw some bacon cuttings on the counter, which were smelling and bad. He saw Mr. Brown, the manager of that shop, and called his attention to them. Mr. Brown admitted that these hams were bad, and that he did not intend to sell them to any person, and expressed his sorrow that he had not had these hams removed. He then drew his attention to the cuttings on the counter, and with the assistance of Mr. Brown, he removed the bad pieces. There were a great lot of cuttings packed up together, some bad and some good. Some, when cut across the centre, were found to be filled with maggots, and some were in a rotten condition. He found also a piece of butter, weighing about 6lbs., on the counter. It was streaked with mildew. When he tasted it he found it to be very bad. He saw a quantity of bacon cuttings on the same counter. He saw also some pigs' joints or knobs on the floor of the shop, a short distance from the door. Mr. Brown told him he believed the pigs' knobs were sound, but when he turned the basket over he found that those in the bottom were in a state of mildew and rotteness, and contained maggots. Then Mr. Brown said they had been kept out in the rain until they became injured, and expressed his sorrow that they had been neglected. He told Mr. Brown he would take them away and have them examined by the magistrate and destroyed. He had them brought before the petty sessions, and got an order to have them destroyed. They were unfit for human food.

Cross-examined by Mr. Harrison, he said he was a sanitary officer for eleven years. A good deal of that time he had been engaged in the task of analysing milk. He could not analyse himself; but he sent the samples to Dr. Hodges. Before he became a sanitary officer he was a land steward. He had no experience of curing hams. He obtained his knowledge of these things by inspecting

them. He made no special study of the quality of hams, but he knew the difference between a good and a bad ham. He never used the testers. He saw on these hams an insect called the "jumper fly." He would not say that the appearance of maggots indicated a bad ham unless the ham was full of them. He would swear one of the hams was a "jumped" ham. The knobs were also maggoted. There were two hams with "jumpers" on them. The "jumpers" were visible. (Laughter.) He believed the butter was cream butter; but there was mildew on it.

This concluded the case for the prosecution.

Mr. Harrison, B.L., opened the case for the defence. He said it was impossible for Mr. M'Kibbin to enter into his defence at the last trial. He did not come there to make an *ad misericordiae* case for Mr. M'Kibbin. If he did try to sell bad meat to the poor of Belfast he should be condemned by all means. He believed Mr. M'Kibbin would be the last to cheat the poor. The hams were there for sale, but not until they had been scraped. He would bring witnesses up who were experts, and who would tell them that these hams were good. The presence of maggots was not the consequence of rotteness. He would show their worships that a mistake had occurred in this case, and that the hams were perfectly fit for human food.

Mr. William Brown was then examined by Mr. Harrison. He was in the employment of Mr. M'Kibbin, Shankhill Road, and had a large experience of bacon curing. On the day in question the inspector came in about eight o'clock a.m. The hams in question were lying on a barrel lid. There were a good many jumpers on some of them, and he laid them aside to be dressed. The butter was perfectly pure. It had been put in the bag with the other things, which spoiled its appearance.

Cross-examined by Mr. Lewis: These hams were not exposed for sale at the time Mr. M'Master saw them. The appearance of maggots affected the eatability of the material.

William Nelson, an employé of Messrs. Coey & Co., was next examined by Mr. Harrison. He said he had a great experience of hams as any man in Belfast. Mildew on a ham told in its favour, as whisky improved with age. He had examined the hams and applied the tester to the worst one of them. It did not taste perfectly sweet in the shank, but it was neither putrid nor rotten. It was perfectly fit for human food. "Jumpers" did not affect the quality of the ham at all.

To Mr. M'Cann: The particular ham he examined was not putrid, except the small portion which contained the "jumpers." It only affected about an ounce of the meat.

To Mr. Hodder: He believed these ham cuttings were perfectly fit for human food.

Cross-examined by Mr. Lewis: The jumpers generally lodge only in a small portion of the ham. When the maggot and "jumper" develop into maturity they leave the ham.

Mr. Thomas Robinson, provision merchant, examined by Mr. Harrison, said he had seen the hams, and could swear they were absolutely perfect. He had a great experience of butter, and could say the butter in question was perfectly good.

Mr. Thomas Bell, provision dealer, in reply to Mr. Harrison, said he had a large experience of bacon curing, and he believed the hams in question were of a very good quality and sound.

William John Luke and Gilbert Ingram gave corroborative evidence.

Mr. Hodder, in giving decision, said the case was brought into the court under circumstances by no means favourable to the magistrates coming to a verdict. The sanitary officer was the only witness for the prosecution. He was glad to say he was assisted that day by a large Bench of experienced magistrates, the majority of whom, however, did not arrive at the same judgment as himself. He should be sorry to lay down the principle that meat in any way tainted should be sold for human food. According to the judgment of the majority of the magistrates, the case would be dismissed.

PAUPERS' MILK.

AT Enniskillen Petty Sessions, Johnston D. Dundas, milk contractor to Enniskillen Union, was charged by Sergeant Robt. Sheridan, inspector of food and drugs, Enniskillen, with having on 31st October, 1897, at Cornagrade, in the county of Fermanagh, delivered to the guardians of the Enniskillen Union in pursuance of his contract, a certain quantity of buttermilk, which, according to the certificate of Sir Charles Cameron, contained 100 per cent. of added water exclusive of 25 per cent. allowed for churning purposes. He was also charged with having on the same occasion delivered a certain quantity of new milk to which (according to the certificate of Sir Charles Cameron) at least 19 per cent. of water had been added, making thereby a mixture of 119 parts of milk and water.

Mr. A. Carson Cooney appeared for the defendant.

Mr. Richey Wilson, clerk of the Union, proved the contract, and Mr. Thomas N. Gamble, master of the workhouse, proved the delivery.

Mr. Cooney submitted that the magistrates had no jurisdiction whatever with regard to buttermilk, and quoted a case tried in Scotland in support of his contention, but the magistrates, on consultation, overruled the point.

Sergeant Sheridan also charged Noble Hilliard, milk contractor, with having delivered a certain quantity of new milk at the workhouse on the same date, which had been certified by Sir Charles Cameron to have been deprived of at least 14 per cent. of its fats.

Mr. Gamble, workhouse master, estimated that the total amount received by Hilliard from the Guardians during the year for supplying sweet milk and buttermilk was £203 12s., and by Dundas, £99 5s.

The magistrates having retired, the chairman said they had considered the cases very fully, and the evidence went to show that there had been a system of adulterating the paupers' milk carried on for years. They had three or four convictions against the defendants already, and therefore it could not be said for a moment that they sinned with their eyes shut, and they had been making money by starving the paupers for years. Hilliard, apparently, was the most extensive contractor of the lot. He took the best part of the milk out and sent the paupers the refuse; he was an habitual swindler of the paupers, there was no doubt about it. Taking the weight of evidence into account, and the duty they owed to the public, he (Mr. Jones) would have certainly put the full penalty on him if he had his way, but he was bound to give voice to the majority of the Bench which was the court, therefore the court had decided to fine Dundas £3 and costs in each case, and Hilliard £4 and costs.

SAUSAGE MAKING.

At Clerkenwell, on December 3rd, Henry Abbenhausen, of 134, Lever Street, St. Luke's, was summoned for having in his possession in preparation for sale, 91 lbs. of beef, mutton, and pork, unsound and unfit for human consumption. Mr. Collins prosecuted on behalf of the St. Luke's Vestry, and Mr. Margetts defended Abbenhausen. Richard Adams, sanitary inspector, said the defendant was a pork butcher. On November 5th he called at his premises. In the boiler-house he found a quantity of pork, mutton, and beef in preparation for food. A quarter of pork was dark in colour and smelt offensively. The pieces of mutton and beef were in a cask of brine, and smelt offensively. He subsequently noticed another quarter of a pig, the muscles of which had been removed. Asked where the muscles were, the defendant said, "In the copper boiling, and if my new man had turned up this morning, you wouldn't have had the other." Dr. Yarrow proved the meat to be in a state of decomposition and unfit for food. The defence was that the beef and mutton were put aside to be taken away by the "fat and bone man." It was contended that the pig, of which the pork was a portion, had only been killed a week. The other part of the pig was used for sausages. Mr. Horace Smith imposed a fine of £20 and 2s. costs.

ADULTERATION OF DAIRY PRODUCTS.

THE Parliamentary Committee of the Royal Lancashire Agricultural Society has issued a report which states, in regard to the Sale of Food and Drugs Bill brought in by the Government at the end of last Session, that it is a great disappointment to find how feebly and inadequately the vital question of adulteration is dealt with in the measure. The Select Committee of the House of Commons which had for three years been occupied with the question made recommendations in their report which went a long way to satisfy the requirements of the case; but in the Government Bill not one single important recommendation of the committee was embodied. The Select Committee recommended that the artificial colouring of margarine to imitate butter be prohibited. This, together with inspection of food products, etc., at ports of landing and the appointment of Government inspectors, the committee considered the three most vital conditions. During 1895 and in the first three months of 1896 arrangements were made for analyses of imported consignments of butter. The Customs took 890 samples, and of these 106 were adulterated, 54 of these samples coming from Holland and 37 from Germany. The committee further recommended that the sale of butter mixed with margarine should be prohibited. Systematic adulteration, they state, has now become a science, and if it is to be stopped it is necessary, in the interests of the whole community, that most stringent measures should be taken. The committee propose to co-operate with the British Dairy Farmers' Association, the Central Chamber of Agriculture, and other bodies in any steps which may be decided upon.

REFUSE DESTROYERS AND ELECTRIC LIGHTING.

CONSIDERABLE interest has been excited in the minds of members of municipal authorities during the past few months on the subject of refuse destructors and electric lighting by the achievements of the Shoreditch Vestry. Combined schemes of refuse destruction and electric lighting have been always alluring ones to municipal authorities, but it is to be sincerely hoped that they will not allow their enthusiasm to outrun their discretion. There can be no doubt that a project which includes the complete destruction of town refuse, with the concomitant advantage of furnishing heat to raise sufficient steam for electric lighting purposes, is a fascinating one; but there is little doubt that, upon a calm investigation of the subject, many of the supposed advantages dwindle away. If in a combined scheme of this nature municipal authorities were influenced first of all by the desire to cremate their town rubbish, and were to place the question of utilising the heat for raising steam in a secondary position, there would probably be very little to urge against the project. But, unfortunately, town authorities, and we are afraid in some cases their engineers, have assumed that they had a means at their disposal of obtaining electric light for practically nothing. It is to be feared, if they do not consider the question with extreme care and moderation, they may only discover the fallacy after an expenditure of many thousand pounds. Ashton-under-Lyne, Pembroke, Swansea, Hackney, Fulham, Llandudno, Gloucester, and Weston-super-Mare are all practically entering upon schemes of combined refuse destructors and electric lighting. There is very little doubt that if these towns go on with their combined schemes the results may be traced to the influence of Shoreditch; but even if the refuse destructor question is voted by common consent to be a success at Shoreditch, and there is every reason to suppose that they have achieved more than any other place has ever done, it must not be forgotten that the conditions of refuse collection in the parish of Shoreditch differ very materially from those of many other towns. It is a well-known fact that in Shoreditch the staple industry is cabinet-making, which results in vast quantities of shavings and small wood being carried away as refuse, and it cannot be denied that such material forms very good fuel. Moreover, as

there is practically a daily house to house collection, the refuse very seldom reaches the depot in the sodden condition that characterises the refuse of many other towns. The results, therefore, that may be obtained in the parish of Shoreditch may have absolutely no significance in towns where the open midden system is used, and where only periodical collections are made. That a certain measure of success can be obtained with the use of refuse destructors for electric lighting purposes cannot be gainsaid, but it is open to serious doubt whether combined schemes of this nature will ever result in that cheapening which municipal authorities are looking forward to with considerable eagerness. It must never be forgotten, too, that there are combined schemes in this country which have proved to be acknowledged failures. The most noteworthy cases are those of St. Pancras and Ealing, in regard to which it is admitted that practically no assistance has been obtained from the cremation of rubbish; indeed, in the case of St. Pancras, owing to the peculiarity of the setting of the boilers for the purpose of utilising the heat from the dust destructor cells, it is not possible to get the fullest benefits out of them, even when using coal alone. It is quite conceivable, however, that a system of refuse destruction may be evolved which will lend itself to the economical production of electric light, but in the meantime we must earnestly counsel local authorities to approach the matter in a reasonable spirit.—*Surveyor, November 12th, 1897.*

SALICYLIC ACID AS A FOOD PRESERVATIVE.

"It is well known to-day," says *The Sanitarian*, "that salicylic acid is a powerful antiseptic. As such it retards the action of organized ferments like the yeast plant and putrefactive bacteria. It hinders and prevents fermentation, the souring of milk, and the putrefaction of milk. Its action upon unorganized ferments is even more powerful. It completely arrests the conversion of starch into grape-sugar by disease and pancreatic extracts. This action is directly opposed to the process of digestion, and, were there no other reason, the use of salicylic acid should be universally condemned. These facts in connection with salicylic acid have been recognised very thoroughly in legislation. The use of the acid has been condemned by most of the European countries having pure food laws. In France it is forbidden by law. In Austria, Italy, and Spain it cannot be used without the danger of incurring a heavy penalty, and all South American States having pure food laws have absolutely forbidden its sale. The laws of many of the States forbid its use. By a decision of Mr. Wells, the Dairy and Food Commissioner, the use of salicylic acid in food is prohibited in Pennsylvania. I wish to call attention here to another fact in connection with the use of salicylic acid, which is of extreme importance, viz., the sale of preservatives, preservatives, etc., under various high-sounding names, intended for use in private families. A number of these, claimed to be perfectly harmless, are on the market, but actually contain salicylic acid as the main ingredient. The conscientious and careful housekeeper should put an absolute veto upon the use of any such compound. There is rarely any need for them, since, when pure fruits and vegetables are used and the proper directions for sterilizing by heat, etc., are carried out, canned or preserved goods of all descriptions can be prepared that will remain in good condition for years without the aid of any preservative."

A NEW CITY ANALYST FOR LIVERPOOL.

THE Health Committee of the Corporation have decided to recommend the Council to appoint Professor Robert William Boyce (University College, Liverpool) as analyst for the city of Liverpool, for the purpose of making bacteriological analyses, that he be paid £210 per annum, and that he be required to undertake 250 laboratory investigations, including 50 samples of water, and that a fee of one guinea be paid in respect of each examination above 250.

A "JURY OF BUTCHERS."

A MEETING of the Crewe Town Council was held on December 1st, the Mayor (Mr. C. H. Pedley) presiding. Mr. H. Hogstroff brought forward the subject of the appointment of a "jury of butchers" to assist the medical officer of health and the sanitary inspector in detecting unsound meat exposed in the market for sale. He said the butchers were anxious to uphold legitimate trade, and when there was a conviction for selling bad meat the whole trade suffered. The medical officer could not always be on duty in the market, but if a jury of butchers was appointed they would be able easily to direct his attention to cases of suspicion. They did not propose to interfere in any way with the duty of the medical officer. Several members thought the suggestion a good one, and its consideration was referred to the Health Committee.

A TIP TO BACON CURERS.

SINCE the beginning of May this year experiments have been going on with a new method of curing bacon at the Ystad bacon factory in Sweden, and the results that have been attained have been so successful that it has been adopted at the Landskrona factory also, which belongs to the same owner. Mr. Philip W. Heyman, of Copenhagen, the well-known curer of bacon, is adopting the same method, too, at two of his Swedish factories, and five of his Danish factories, and other bacon factories in Sweden and Denmark are making arrangements for having the same method introduced. The auto-cured bacon is treated in the following manner: The meat is cooled in the usual way and placed in large strong iron cylinders that can hold about 200 sides of bacon at one and the same time, and the lids are closed and can be kept closed by water pressure. The advantages claimed for this method, which is patented, are, besides others, the following: The auto-cured bacon will retain the juice of the meat, by which it becomes more nutritious and tender and of milder and more agreeable flavour than bacon cured according to the usual method, and it is easier to digest and keeps for a longer time than the latter, so that it need not be "forced off" in sale even during hot weather. It will lose no more in weight than other bacon, when smoked. Swedish auto-cured bacon has been sent "unbranded" for some time to London from the above-mentioned factory, together with other bacon cured according to the usual method, and has been preferred to the latter, having attained about a couple of shillings per cwt. higher price. The first bale of "branded" auto-cured Swedish bacon, marked "Down's auto-cure patents, Sweden," has been forwarded to the official representative for Sweden, Dr. Hugo Wedin, of Lancaster Avenue, Manchester, "for show," having arrived last week, and has been inspected and tasted by a number of merchants interested in the bacon trade here. It is expected that this bacon will soon find an increased sale on its own merits.

BUCKINGHAMSHIRE COUNTY COUNCIL AND FOOD ADULTERATION.

MR J. WHITEHOUSE GRIFFIN moved the following resolution:

(1) "That, in the opinion of this Council, the Sale of Food and Drugs Bill introduced by the Government last session is entirely inadequate, that no measure will be satisfactory which fails to give full effect to the recommendations of the Select Committee on Food Produce Adulteration, endorsed as they have since been by the Royal Commission on Agriculture; and that a measure embodying these recommendations should be introduced and passed into law early in the coming session of Parliament." (2) "That copies of this resolution be forwarded to the Presidents of the Boards of Local Government and Agriculture."

He contended that pure food for the people was of the greatest importance. If anything it was more important to poor people than to producer and distributor.

Lord Addington seconded the resolution and it was adopted.

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 Corr. Mem. French Institute. | 40 Years Food Analyst to H.M. Government.

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Food and Sanitation.

SATURDAY, DECEMBER 18TH, 1897.

FARMERS THEIR OWN ENEMIES.

EVERY day sees some assembly of farmers whining for protection from some fraud or other. We are getting tired and disgusted with their whines, for when anyone seeks to protect them it is found that either through ignorance or pig-headedness the farmer persists in being his own enemy. A few weeks ago the able stipendiary for South Staffordshire caused a prosecution to be instituted in a manure case. We report the sequel in another column.

The manure was not only wholly unsuited for turnips, but was not worth much more than £2 per ton, against £6 10s. and £7 10s. per ton charged for it. The judge, after allowing that a good crop may not be due to the manure last applied, but to the previous condition of the

land, etc., without any real evidence on this point except the *ipse dixit* of a publican, who said his land was previously in the "lowest possible condition," ignored what he was pleased to call "theory," but which was really based on a far better established fact, and fact only, than that those good crops of turnips those farmers spoke to were due to this shoddy stuff.

A case like this is particularly disheartening, because it was defended simply on public grounds. It would appear that even an educated gentleman like Judge Jordan is ignorant of all the practical trials made during the last forty years, under the most exact conditions, by Lawes, Gilbert, and others in various parts of the country.

Mr. R. Warrington, F.R.S., says in his book, *The Chemistry of the Farm*, the "special characteristic of manure for turnips should be phosphatic." Dr. Bernard Dyer, in his book on Fertilizers, says: "Whilst turnips are exceedingly responsive to artificial supplies of phosphates, they do not as a rule show much gratitude for nitrogenous manures."

Yet phosphates were what this manure had not got.

THE METRIC SYSTEM IN SIGHT.

AN inestimable benefit was conferred on mankind when the zealots of the first French Revolution, in their efforts to make a new heaven and a new earth and to have a fresh start generally, introduced the decimal system of weights and measures known as the metric system, says *The British Baker and Confectioner*. Their new calendar, including a renumbering of the years, was not an improvement on the old system, and was felt by the mass of the people to be ridiculous. At the same time, as long as the guillotine was kept in sight, it was adopted, but no one regretted its extinction by the first Napoleon. It was very different with the metric system. Once it had been promulgated and insisted on for a few years, its surpassing excellence became recognised, and when it had once recommended itself to human intelligence by its merits no legal or illegal edicts could check the progress made every day in replacing other systems by it.

The metric system speedily became not merely the only one in use by all classes in its native country, but was taken hold of by scientific men all over the world. Of late years its use has been steadily growing; but we Britons, true to our conservative nature, and to our reluctance to abandon any practice or scheme which we have managed to make do by persevering in it, even when the practical experience of others has shown us that some other is better, are the slowest to adopt the metric system of all the nations. At the time of its origin the English feeling against the French was as high as it had ever been during the centuries since the Norman Conquest. It was so "un-English." There was only one litre, but we had all manner of delightful complexities in the corresponding measures. Nobody knew exactly what a pint was. There were, and are, the Winchester pint, the Corbyn pint, the reputed pint, etc.; and so on with bushels, etc., etc. Then, again, in the metric system there is just one set of weights in a decimal series, while in our own tables we have troy weight, apothecaries', avoirdupois. There are two sorts of ounce, pound, and stone, one system for wool, another for corn, and the relations between the different units in the scale are expressed by an immense number of different and wholly unconnected numbers. 12 inches=1 foot, 3 feet=1 yard, 5½ yards=1 pole, and so forth.

Were all these ingenious and elaborate devices to be swept away, and with them the major part of the arithmetic books, what would become of the compound rules, so essential to the proper education of our youth? These take up time which might, if they were abolished, be devoted to frivolous subjects, such as chemistry, for example. Reducing a few hundreds of millions of square inches to square miles, acres, roods, etc., will take a boy a goodish while, and he will probably get it wrong; but to reduce the same number of square millimetres to hectares, ares, etc., only wants two or three dots of ink and takes about three seconds, while

only a boy with more than the average genius that his species possesses for making mistakes can do it wrong. The Weights and Measures (Metric System) Act of this year has clinched another nail in the coffin of the British "tables," and as the generations which have learned that that 437½ grains make an avoirdupois ounce gradually die out, the metric system, in which measures of weight, length, and capacity are intimately connected with one another, and in working with which nothing has to be done except moving decimal points, will gain ground, and will, in time, be the system of the world. The advantage which would result to trade if such a system were common to all races needs no pointing out.

It will surprise some people to learn that until this Bill became law on August 6th it was illegal to possess, for the purposes of trade, a metric weight or measure. In fact, according to this same Bill, the metric system is now in full voluntary operation in the United Kingdom. The text of this Act to Legalise the Use of Weights and Measures of the Metric System is as follows:

1. Notwithstanding anything in the Weights and Measures Act, 1878, the use in trade of a weight or measure of the metric system shall be lawful, and nothing in Section 19 of that Act shall make void any contract, bargain, sale, or dealing by reason only of its being made or had according to weights or measures of the metric system, and a person using or having in his possession a weight or measure of the metric system shall not by reason thereof be liable to any fine.

2 (1) The Board of Trade standards, which may be made under Section 8 of the Weights and Measures Act, 1878, shall include metric standards derived from the iridio-platinum linear standard metre and iridio-platinum standard kilogram, deposited with the Board of Trade, and numbered 16 and 18 respectively. (2) It shall be lawful for the Queen by Order in Council to make a table of metric equivalents in substitution for the table in Part I. of the Third Schedule to the Weights and Measures Act, 1878, and, as from the date in which the Order in Council comes into operation, Part I. of the said schedule and Sections 18 and 38 of the said Act shall be repealed.

3. This Act may be cited as the Weights and Measures (Metric System) Act, 1897, and may be cited with the Weights and Measures Acts, 1878 to 1893.

It is not to be expected that there will be much disposition to take advantage of this Act, but it is a step in the right direction. Unless there is a perfect unanimity in adopting the metric system half its benefits will be lost, and this unanimity can only be ensured by making the system compulsory. We are glad to note that there are symptoms of a strong agitation to this end.

FARMERS AND PATENT MANURES.

At Lichfield (before his Honour Judge Jordan), on December 1st, this case afforded a sequel to the recent prosecution at Lichfield by the Staffordshire County Council under the Agricultural Fertilizers and Feeding Stuffs Act. On September 22nd Messrs. Ginster and Sons, patent manure manufacturers, Erdington, were proceeded against at Lichfield and Brownhills Petty Sessions, and mulcted in penalties and costs amounting to £33 18s. for offences under the Act, with regard to manure sold to Mr. N. C. A. Neville, stipendiary magistrate for South Staffordshire, for use at Shenstone House Farm, of which he is the owner and occupier. Messrs. Ginster and Sons now brought an action to recover from Mr. Neville £19 10s., the value of the three tons of manure, at the rate of £6 10s. per ton, which was admitted, but he, on his part, made a counter-claim for £43 4s., reduced by amendment to £31 16s., under the Sale of Goods Act, on the ground that the manure was not in accordance with the terms of the contract, and not reasonably fit for the purpose for which it was intended. Mr. Vachell (instructed by Messrs. Buller and Cross, Birmingham) appeared for the plaintiffs, and Mr. Disturnal (in-

structed by Mr. Herbert Russell, Lichfield) represented the defendant. The ordering and delivery of the manure being admitted, evidence only was given on the counter-claim, and, on behalf of Mr. Neville, witnesses were called to show that the manure was not such as was required, and had resulted in serious loss in the crops of swedes for which it was used. Mr. Neville and his bailiff stated that the manure was spread over an area of nine acres, and that six acres were sown with swedes, which only yielded about 11½ tons per acre, as against 21 tons and even 30 tons per acre on some other portions of the farm. The seed, they said, came up very well at first, but afterwards seemed to stop growing, thus indicating that there was something wrong with the manure, and that it was deficient in fertilizing properties. Application was made for the necessary invoice under the Fertilizers and Feeding Stuffs Act, which Messrs. Ginster had failed to supply with the manure, and it set forth that the manure contained from 5½ to 6½ percent. each of ammonia and phosphates, and 2 per cent. of potash; and Mr. Neville said that, if he had been aware it was so deficient in phosphates, he should not have used it for such a purpose as growing swedes. Mr. E. W. T. Jones, Public Analyst and District Agricultural Analyst under the Fertilizers and Feeding Stuffs Act for the County of Stafford, said he had over 35 years' intimate connection with agricultural chemistry and the composition of artificial manures, and the result of his analysis of the sample in question was as follows:

| | | |
|------------|-------------|----------------|
| Nitrogen | | 6.29 per cent. |
| Phosphates | { Soluble | 3.00 " |
| | { Insoluble | trace " |
| Potash | | 0.39 " |

He said it was mainly shoddy or wool waste, and the very outside value was under £3 per ton. He would not have recommended a private client to give more than £2 per ton for it; it was wholly unsuitable for the fertilisation of turnips, which require essentially phosphates, and were not so grateful for nitrogenous manures. This stuff was rubbish as compared with a properly prepared turnip manure, which should contain, say, 15 to 20 per cent. of soluble phosphates and 6 to 10 per cent. insoluble bone phosphate.

Dr. Voelcker, consulting chemist to the Royal Agricultural Society, gave evidence supporting that of Mr. Jones. He had practical acquaintance with the use and value of fertilisers, and he said this could not in any sense be considered as a proper turnip manure. Mr. J. T. Glover, estate agent, of Canwell, and Mr. F. W. Rudgard, farmer, of Hints, gave evidence to the effect that Mr. Neville's land was suitable for growing swedes, that the season was a good one for roots, and that with proper manure a crop of about 20 tons per acre might have been reasonably expected, instead of from 11 to 12 tons per acre, as had been produced. Mr. Vachell said he should rely on the farming experience of practical agriculturists in the field as against the fantastical theories of the eminent experts in the laboratory, and proceeded to call a number of well-known landowners and farmers in the neighbourhood of Lichfield. Lieutenant-Colonel Robert Levett, Packington Hall, Mr. Edward Kendrick, Weeford, Mr. T. H. Pearce, of Packington Farm, and Mr. Hennis A. Pass, of Whittington, gave evidence to show that they had used Messrs. Ginster's manure on both farm and accommodation land with the best possible results, as much as 25 tons of swedes per acre having been produced from land previously in the lowest possible condition, and all of them declared it to be their intention to use the manure again. The Messrs. Ginster having given evidence as to the composition of the manure, and the difference in qualities, his Honour said he had been much impressed with the testimony of the men of practical experience, and felt that he must be guided by it in dealing with what was a somewhat difficult case. An ounce of fact was worth twenty pounds of theory in such a matter as this, for it was so hard to say what was necessary to produce good crops, and it was one of the mysteries of farming to account at any time for the failure of a particular crop. But here, respectable practical farmers came forward and said they

had used these people's manure with the best and fullest results, and he had no hesitation in saying that in his opinion the weight of evidence was on their side. The experience of those practical men was very weighty and conclusive to his mind, as against the evidence of the experts, which was very largely speculation—in fact, simple theory. In face of it, he could but decide on the main issue that the manure was reasonably fit for the purpose for which it was intended, and give judgment for the plaintiffs for the full amount claimed with costs. As regarded the counter-claim another question arose, and there had undoubtedly been a breach of the terms contained in the invoice, which, under the Fertilizers and Feeding Stuffs Act, was made a warranty in these transactions, the evidence showing that the manure supplied contained only 3 per cent. of phosphates as against the $5\frac{1}{2}$ or $6\frac{1}{2}$ per cent. set out in the invoice. That was a breach of an express warranty, but was a trifling matter as compared with the main issue. It was difficult to assess the damages which had accrued in consequence of that small difference, but he had no hesitation in fixing it at £5, and as the plaintiffs had succeeded on the main issue he should allow no costs in that respect. Judgment accordingly for the plaintiffs with costs on the main issue, and for £5 without costs on the counter-claim.

WATER AT SPIRIT PRICE.

At Gloucester, on December 11th, Emily White, landlady of the "Royal Oak Inn," Hucclecote, was summoned for selling whisky, which added water had made $31\frac{1}{2}$ degrees under proof. She was fined 10s. and costs. Defendant was further summoned for permitting drunkenness, and for supplying drink to drunken persons. For this she was fined 10s. and costs. The bench took a lenient view of the case, as defendant had managed the house for 25 years without complaint.

At St. Augustine Petty Sessions, Thomas Edward Camburn, of the "Sovereign" Inn, Whitstable, was summoned for selling a quantity of whisky adulterated below the legal standard. Defendant pleaded guilty, but said his wife served it. Fined £2 8s., including costs, the licence not to be endorsed.

At Loughborough, Thomas Bond, licensed victualler, Kegworth, was summoned for selling adulterated whisky, on November 8th, and pleaded guilty. Deputy Chief Constable Smith said he purchased a pint of whisky from the defendant's house, the "Red Lion Inn," Kegworth, on the date named. The whisky was submitted for analysis in the usual way, and the result showed that it was $31\frac{1}{2}$ deg. below proof, and $6\frac{1}{2}$ deg. below the legal standard. A fine of £2 was imposed, to include costs.

JAMES WARING, landlord of the "Black Bull" Inn, Ribchester, was summoned before the Blackburn County magistrates, on December 8th, for selling diluted Scotch whisky. P.S. Hatton stated that he purchased the whisky from defendant, and the public analyst had certified that it contained five per cent. excess of water over the 25 per cent. which was the standard. Mr. Read, who appeared for the defendant, admitted the offence, and said the "weakness" arose through his client not using a tester. In some cases the defendant had prepared rum, which was well within the limit. The magistrates imposed a fine of 20s. and costs.—Thomas Hardiker, "Red Lion" Inn, Ribchester, was summoned for similar offences in regard to rum and Irish whisky, the rum containing six per cent. excess and the whisky ten per cent. For the first offence defendant was fined 20s. and costs, and for the second 40s. and costs.

At Swansea, Susannah Rees, Llansamlet, was summoned for selling adulterated whisky on the 4th inst. Sergeant Eynon proved the offence, and a fine of 20s. inclusive was imposed.

At Leicester, on December 4th, Jane Sibson, licensed victualler, Great Wigston, was summoned for selling adulterated whisky on November 5th last.—Mr. Fowler repre-

sented the defendant, who was unable to be present.—Supt. Ormiston, of South Wigston, said he sent a police constable to defendant's house to purchase some whisky, part of which he submitted to Dr. Dyer, county analyst. His report he now presented, and this showed that the spirit was three degrees lower than that allowed by the legal standard.—In cross-examination the superintendent stated that Mrs. Sibson, who is now 77 years of age, had kept the house for ten years, and her husband 32 years before her. He had never known anything against either defendant or her husband, and Mr. Fowler asked the magistrates to inflict a nominal penalty, as there was no doubt that the offence was a pure accident, due to evaporation. The magistrates had the character of defendant before them, and they would observe that there had been no complaint against her.—The magistrates inflicted a fine of 15s. including costs.

MILK.

At Hereford, Stephen Herbert, innkeeper, the "Barton," was charged by P.C. Charles Ovens with having sold, to the prejudice of the informant, a quantity of milk not of the nature, substance, and quality of the same then demanded, on the 29th October.—Mr. W. Carless appeared for the prosecution, and said that the analysis showed that there was eight per cent. of added water.—P.C. C. Ovens said that about 8.30 a.m. on the 29th October he was with Inspector Taylor in Stanhope Street. A man named William Langford, in the employ of the defendant, was selling milk. Witness asked for half a pint of new milk, tendering a penny as payment; witness then told him that the milk was to be analysed, and offered to give Langford a sample. Langford declined, and witness then sealed the bottle containing the milk, labelled it, and forwarded it to Dr. Bostock Hill, the public analyst for the city of Hereford. Witness subsequently received a certificate showing that the milk contained eight per cent. of added water.—James Taylor, Inspector of Nuisances, corroborated. The sample was taken in consequence of complaints.—The defendant said that he was quite innocent of the offence. The man milked the cows, and witness had to trust to his honesty.—Mr. Carless said that a plea of ignorance was no defence.—The Chairman said that the Bench considered the case proved, and added that the defendant was responsible for the actions of his employé. Defendant would be fined 10s. and costs 19s. 6d., including 10s. 6d. the analyst's fee, or 14 days with hard labour.

At Birmingham on Dec. 10th, Frances Pratt, Henley-in-Arden, farmer, was summoned for selling milk containing 24 per cent. less fat than natural, on November 17th. Mr. Hiley (town clerk's office) prosecuted, and Mr. Saunderson (Warwick) defended. Defendant was under a contract to supply a milk-dealer, named Edward Hickson, with "pure new milk with all its cream." On November 17th Inspector Jones went to Snow Hill Station, and took a sample of milk from a churn consigned by defendant to Hickson. The milk was taken immediately on its arrival by train from Henley-in-Arden. On the following day Jones took a second sample. The samples, on being analysed, proved to be deficient of 24 per cent. of natural fat. Jones stated that he visited defendant's farm at Henley, and defendant's husband said that he knew they had two cows that did not give milk up to the standard. Dr. A. Hill gave evidence of the analysis he made, and said that the samples were deficient of 24 per cent. of fat. For the defence, Mr. Saunderson contended that the milk in question was the natural produce of the cows, and under those circumstances defendant should not be held responsible. Defendant's husband said that the milk was despatched to Birmingham in exactly the same condition as it came from the cows. The Bench, after considerable deliberation, said that, taking into account all the circumstances, they would only impose fines of 20s. and costs in respect of the two cases.

THOMAS LOWE, farmer and dairyman, of Prestonbrook,

Cheshire, was summoned on four informations at St. Helens Police Court, on December 3rd, before Alderman Sinclair and Mr. Michell, charging him with consigning adulterated milk to Thomas Webb, dairyman, of Hamer Street, St. Helens. Mr. W. J. Jeeves, Town-clerk, prosecuted, and Mr. Arthur Browne, of Warrington, defended. Great interest was taken in the case among the dairymen of the town, and a number of members of the local association were present in court. Mr. Jeeves said the cases were brought under the Sale of Food and Drugs Act, 1875. Sergeant Kerrington, acting on the orders of Chief Constable Wood, took two samples of milk on Sunday morning, November 7th, from two cans of milk which had been sent by defendant to Mr. Webb. The samples being analysed were found to contain 24 and 21 per cent. of added water, assuming that the milk was of the poorest quality. He (the Town Clerk) would be able to prove that ordinarily the milk from that dairy was rich and genuine. The milk which came to St. Helens was composed of a quarter of added water, and if the milk was ordinarily rich and genuine the offence of adulterating to the extent that defendant appeared to have done was a most iniquitous one. On November 18th, Sergeant Kerrigan took a couple more samples from the cans that arrived at the railway station, and these were found to contain 10 per cent. of added water, judging the milk from the poorest standard. It was interesting to note that, notwithstanding the tremendous amount of adulteration that defendant had gone in for, he put labels on each of the cans, which guaranteed the milk to be new and genuine. On November 25th, Kerrigan took another couple of samples, which, on being analysed, were found to be rich and genuine milk. Mr. Browne said he would not question the evidence or the analyst's certificate. There was, however, always an explanation to those cases. Mr. Lowe was a highly respectable farmer; but unfortunately he had taken a farm at Preston Brook, which was known to be one of the poorest farms in the county. His milk had suffered in consequence. On the Saturday before the first lot of milk was sent away defendant was a jurymen at Chester Assizes, and never saw the milk that had been found to be so poor. If the man who milked the cows put water in he did it contrary to orders. On the second occasion defendant's cows had eaten a lot of green stuff, which had affected the milk. He contended that it was most unlikely that defendant would add as much water as had been spoken to, and then label the milk as guaranteed new and genuine. Defendant gave evidence, and a neighbouring farmer deposed to the poorness of the farm. The chairman said there were four cases, and the defendant would be fined £5 in each case.

At Hertford, on December 9th, John Parkins, of Burnham Green, Datchworth, was summoned for selling milk which was deficient in fat. Mr. Johnson, the Inspector of Food and Drugs, prosecuted, and Mr. Alfred Baker defended. The Assistant Inspector gave evidence to the effect that he purchased the milk from Mr. Parkins, who said that he had sold it as he had received it. Cross-examined by Mr. Baker: The defendant had a large churn in his cart, and from this his smaller can was filled. Witness asked for new milk. It was perfectly true that the summons stated new milk and not milk. Mr. Johnson, the inspector, produced the certificate of the analyst, Mr. A. E. Ekins, stating that the milk was deficient to the extent of 50 per cent. in fat. By Mr. Baker: When he asked for new milk he expected to get new milk, with a reasonable quantity of fat and not too much water. He did not know that there was a difference in the commercial value between "new milk" and "milk." It had been decided that if a person asked for milk and got skimmed milk he got what he asked for. Mr. Baker: How is it that you charged him in your information for selling milk when you asked for new milk, which I contend is altogether different?—Mr. Johnson: It makes no difference. The information is worded in accordance with the Act.—Mr. Baker contended that the information was technically wrong, but as the Bench over-ruled that objection he said he must admit that defendant had

committed a technical offence, but the state of the milk came about by natural causes, as the cream rose to the top of the churn, and the thinner milk at the bottom was drained out of the tap.—The Clerk said Mr. Johnson did not suggest that the defendant had wilfully taken away the fat. He was bound by his position to protect the purchaser, and he could only speak to the state in which the milk was found. There was no evidence or suggestion that there was a wilful offence on the part of defendant, or that he knew that the milk was deficient in fat.—The Bench fined the defendant £2 and costs—expenses 11s. 6d., and Analyst's fee 10s. 6d.

MARGARINE.

At Salford, on December 8th, Michael Keegan, of Clifton Lane, Broughton, a wholesale provision dealer, was summoned under the Food and Drugs Acts with having sold margarine as butter, and also with being a wholesale dealer and selling margarine which was not properly marked. Mr. Evans, deputy town clerk, who prosecuted, stated that the charge was that the defendant sold three-quarters of a pound of margarine as butter. Mr. Desquesnes, on behalf of the defendant, admitted the offence. The defendant had been previously convicted, and he was now ordered to pay £10 and costs for selling the article. He was ordered to pay the costs on the other summons.

At Faversham, John Lampkin, grocer, was summoned on Dec. 8th, for selling adulterated butter. The sample was certified to contain 63 per cent. of foreign fat. Defendant pleaded that he was only in a small way of business and bought the butter from a local grocer. He was under the impression that what he was selling was pure butter. The Bench imposed a fine of 2s. 6d. and costs.

At West Ham, on December 8th, Edwin Cullum, of 21, Broadway, Gipsy Lane, Forest Gate, was summoned before Mr. Baggallay for selling margarine not labelled as such, as required by the Act.—On November 2nd some of the West Ham sanitary officers called at the defendant's shop. One went in and asked for half a pound of tenpenny butter, but three-quarters of a pound was weighed out, and only 5d. was charged. When the compound was analysed it proved to be margarine.—The defence was that the highest-priced margarine was 8d. a pound, and the lowest-priced butter 10d., and the assistant made a *bonâ fide* mistake. As to the extra weight given, it was explained that to draw custom 50 per cent. more of butter or margarine than asked for was given to all customers.—Mr. Baggallay (to Mr. F. Stern, who defended): Do you mean to tell me that $\frac{3}{4}$ lb. of real butter can be sold for 5d.?—Mr. Stern: No, sir; it is a trick of the trade. They lose on the butter and margarine.—Mr. Baggallay: They don't lose on the margarine if they sell it as butter.—Mr. Stern: It is a trick of the trade, and is often done. The loss on the butter and margarine is made up on other articles.—Mr. Baggallay imposed a fine of 40s. and costs.—For similar offences, Daniel Davies, of 3, St. George's Market, Upton Park, was fined £2 and costs.

At the Faversham County Petty Sessions, James Gilham, grocer, Oare, was summoned for selling butter adulterated with 87 parts of foreign fat as pure butter. Mr. R. M. Mercer, who defended, pleaded that defendant sold the substance under the impression that it was butter, he having bought it as such wholesale. The magistrates, however, held him responsible, and as he had been convicted of a similar offence previously imposed a penalty of £3, with 11s. costs.

At Coalville, on December 10th, Arthur Mason, grocer, of Albert-street, Burton-on-Trent, was summoned for selling as butter a substance which contained 75 per cent. of fat foreign to butter. Superintendent Holloway prosecuted. Mr. Richardson, of Burton-on-Trent, defended. P.C. Hiron stated that he went to the defendant's stall in the market at Coalville, on November 5th, and asked for a pound of butter from defendant, who pointed to some and said that that was all he had, and he wanted it for a friend. Witness then went away without the butter. By the Bench:

There was nothing on the stall to indicate that there was anything besides butter there. Mrs. Marriott, of Coalville, said that she went to the stall, and defendant supplied her with a pound of butter, which she handed to Superintendent Holloway, who was standing near. She gave 10d. for the butter. By Mr. Richardson: Superintendent Holloway instructed her to go to the stall. Superintendent Holloway deposed that he instructed Mrs. Marriott to purchase the butter, and on her handing it to him he went to defendant, and told him that he had just sold the woman the butter. Defendant replied, "I did not sell her the butter; I've not seen her before." He told witness that he had seen him supply her with it. He still denied it, and the woman said, "Oh, yes, you did." Witness told defendant what his motive was in purchasing the butter, and that it was for analysis, and asked for the consent of defendant to divide it into three parts. Defendant agreed, and then he divided the quantity, and gave defendant one, kept one, and sent one to Dr. Bernard Dyer, the county analyst. While he was sealing the jars on defendant's stall, defendant said, "I wrapped the butter in two papers." Witness replied, "This is the only paper the butter was wrapped in. I shall take care of this, so that it can be produced if required." Defendant then produced a bundle of papers. They were folded up. He opened one, and said, "You see what is printed on them." Margarine was printed on it, but the printing was inside. He also showed witness a box lid on which margarine was also printed, and said: "You see what I am selling." When he served the summons at his place at Burton, defendant said he thought he sold it fair. Witness handed in the analyst's certificate. By Mr. Richardson: He was prepared to swear that there was no label denoting that the article was margarine. Inspector Kirchin stated that he saw Mrs. Marriott hand Superintendent Holloway a pound of butter wrapped in a piece of clean paper. The word "margarine" was not in evidence, though defendant said that he was selling margarine. By Mr. Richardson: He only saw the margarine papers produced by defendant when Superintendent Holloway was sealing the jars. Mr. Richardson, for the defence, said that the evidence of the prosecution was partly true and partly false. Defendant, examined, said that Mrs. Marriott asked for a pound of butter, and he told her that he did not sell butter, but had "this" (margarine). She asked for a pound. She handed a shilling, and he charged 9d. He noticed Superintendent Holloway taking samples in the market. He had previously been asked for butter by P.C. Hiron. He had the tub (produced), the lid, and margarine on the stall, and the papers with margarine printed on them. He wrapped Mrs. Marriott's order in a "margarine" printed paper, and she asked for more, and he wrapped it in plain paper.—By the Bench: When P.C. Hiron asked him for butter he (defendant) said that he had only "this," pointing to the margarine which was labelled as the article was in court.—By Superintendent Holloway: He could not account for the paper he (Superintendent Holloway) produced in court being buttered if there was a paper between it and the butter. William Lees, a boy, said that there was no butter on the stall. He saw "margarine" marked on the tub. By Superintendent Holloway: He was not present when Mrs. Marriott purchased the pound, and, therefore, could not say what the conversation was. Alfred Scarborough, a collier, swore that he heard Mrs. Marriott ask for butter, and she was told by Mason that it was margarine, and she said, "Well, give me a pound." He saw "margarine" printed on a label on the stall. Kate Scarborough, wife of the previous witness, said Mrs. Marriott asked for a pound of butter, and Mason said that he had not the best butter, but "poor butter," and she said, "Well, give me a pound of that," and he handed her a pound cut from a heap labelled "margarine." By Superintendent Holloway: The article was standing on a tub, as it was there in court. Defendant was fined three guineas and costs, £1 6s., or one month. The money was paid.

MEAT.

At Guildhall, London, on December 8th, before Mr. Alderman Samuel Green, George Henry Gurney, a butcher, of 508, Beresford Street, Woolwich, was summoned at the instance of the Commissioners of Sewers for being the owner of two pieces of beef, which were deposited in the Central Meat Market for sale, the same being diseased and unfit for human food. He was sentenced to three months' imprisonment with hard labour.—Henry Lord, a farmer, living at Elmswell, Suffolk, was summoned for sending to the Central Meat Market the carcase of a pig that was unfit for food. He was fined £25 and £5 5s. costs.

At Devizes, on Dec. 8th, Richard Hambley, butcher, of Sidmouth Street, Devizes, was summoned, on the information of the inspector of nuisances of the Urban District Council, for having on his premises meat for human food which was unfit for that purpose. Mr. T. C. Hopkins, solicitor, appeared for the Urban Council, and Mr. Lynch, barrister, defended. The case evoked considerable interest, and occupied a long time in hearing. The facts were that on November 10th Hambley bought five beasts from a local dealer, amongst them being a lame cow. The latter was sent to a slaughterman named Hunt, who lives a couple of miles out of Devizes, to be killed and dressed. The police watched the slaughter-house for a day and night, entering the place in the night and examining the meat. They kept up their watch until, just after nine o'clock on the night of November 12th, Hambley's cart came for the carcase. It was quartered, and the head, heart, liver, and lungs were taken away within the cart. The constable who had been watching the slaughter-house mounted his bicycle and rode on to Devizes in advance, fetching the inspector of police and the inspector of nuisances to Hambley's shop. A raid having been made, the fore and hind quarters were found hung up in the passage, with other joints of meat, the head, heart, liver, &c., being in the shop. The lungs were evidently diseased, and the meat soft and flabby and of a bad colour. The inspector of nuisances seized the lot, and it having been condemned by the medical officer, it was destroyed by order of the magistrates, and the present proceedings were instigated. The man who killed the cow said he saw nothing the matter with it, except that it had the "crankums"—a species of lameness resulting from a sprain. He killed it at ten o'clock at night. The defence was that the meat was intended to be boiled down as food for dogs belonging to Hambley's son, and that it was hung in the passage till morning, when it would have been taken to the yard beyond. The bench convicted the defendant, and inflicted a fine of £5 and £3 12s. 6d. costs. Notice of appeal to the quarter sessions was given.

THE OPEN CHURN AGAIN.

At Swindon Petty Sessions, Thomas Wheeler, farmer, of Toothill Cottages, Lydiard Tregoze, was summoned for selling adulterated milk. Mr. H. Bevir prosecuted on behalf of the Wilts County Council, and said that the analyst's report was to the effect that the sample contained not less than 4 per cent. of added water. William Hancock, dairyman, of Swindon, said he purchased milk from defendant, and the sample taken by the inspector was from milk supplied him by defendant. Mr. Sam Smith, inspector under the Food and Drugs Act, proved taking the sample. Defendant pleaded guilty, but said the churn remained in the open all one night during a heavy downfall of rain. Mr. Bevir said that having regard to the actual downfall, and assuming that the mouth of the churn was 14 inches, there would be as nearly as possible 13 ounces of water in the churn. As a matter of fact, there were 83 ounces. The chairman said the offence was a very bad one, as it was hard on the honest producer, the retailer, and the public. Defendant would be fined £5, including costs. Time was allowed for payment.

LARD.

At Hastings, on December 4th, in the case of Lathom v. Morris, a prosecution against a tradesman at Bexhill, for selling adulterated lard, in which the case was adjourned to enable a sample of the lard to be sent to the Somerset House authorities, the certificates from the Government analyst were now read, stating that it contained no beef fat, and that the sample was genuine. Mr. Knight, for the County Council, consented to the dismissal of the case. Mr. Mason (for defendant) applied for costs, remarking upon the expense incurred in getting the best possible expert evidence. The case was dismissed, with costs. The sum allowed was £5 14s.

HORSEFLESH AS FOOD.

In the Belgian prisons horseflesh is cooked for the inmates, as in Germany, under the name of American bacon. In Hamburg, says *The Farmer's Gazette*, horsesteaks are baptised "venison cutlets," and morsels for soup "Hamburg joints." Some Belgian farmers, since horseflesh is 50 per cent. cheaper than other meat, tried to use the "American bacon" for their men, when the latter at once struck. Had they lived in the time of the ancient Scandinavians they would have struck did they not receive their portion of horse. The priests sacrificed piebald horses to the god Freys, and, when cooked, handed morsels round to the faithful to preserve them from harm. To extinguish that form of worship of idols, the Church condemned the use of horseflesh. In China there is a special race of horses, as of dogs, reared for culinary purposes. Since the siege of Copenhagen, in 1807, when horseflesh became an accepted food, that kind of meat has progressed by leaps and bounds as an article of consumption. Made into soup, no difference could be distinguished between it and that prepared from beef. For frying potatoes its fat has no equal in point of nuttiness of flavour. It melts at 86 degs. Fah., while lard requires 104, and beef fat 110 degs. It may be interesting to give the composition of the chief flesh foods consumed by man. According to Koenig, the following analyses explain themselves, per mean percentage:

Horseflesh—Water, 74.27; nitrogenous matter, 21.71; fat, 2.55; non-nitrogenous matters, 0.46; ash, 1.01.

Fat Ox—Water, 70.96; nitrogenous matter, 19.85; fat, 7.70; non-nitrogenous matter, 0.41; ash, 1.07.

Sheep, half fat—Water, 75.99; nitrogenous matter, 17.11; fat, 5.75; ash, 1.33.

Pig, fully fat—Water, 47.40; nitrogenous matter, 14.54; fat, 37.44; ash, 0.72.

In the dry state horseflesh contains 13.70 per cent. of nitrogen, and pork 4.49; while of fat the latter contains 70.40, and the former only 8.46. Beef and mutton, in the dry state, contain alike 11½ per cent. of nitrogen.

NEVILLE'S BREAD PROSECUTION.

On Thursday in last week, at the Brentford Petty Sessions, Mr. Richard Neville, the well known bread manufacturer, and proprietor of "Neville's Bread," of the Priory, Acton, was summoned by Inspector Tyler, of the Middlesex County Council, under the Food and Drugs Act, for having sold bread otherwise than by weight. Last week Mr. Neville did not appear to the summons, but sent his foreman, but the justices said Mr. Neville should have appeared personally, and granted a warrant for his arrest. The next morning he was charged on the warrant, and bound over in his own recognisances to appear. Asked by the Clerk if he would plead guilty or not guilty, the defendant said he would rather hear the evidence first. Inspector Tyler proved stopping the defendant's servant after he had served a small shopkeeper with six loaves without weighing them, in Stanley road, Acton, on November 8th. Witness weighed the bread. The loaves were supposed to weigh 2 lbs. each. One, however, was ½ oz. short, one was the correct weight,

another was ½ oz. short, and one ¾ oz. short, while of the remaining two, one was 1½ ozs. over weight, and the other 1½ ozs. under weight. Mr. Neville said he did not dispute the correctness of the inspector's evidence. He had sold bread by the loaf in this way for many years, and had never been summoned before. Some time ago the question arose, and he saw Mr. Spencer, of the London County Council, who suggested that bills should be printed intimating to the public that the bread was not sold by weight. Mr. Spencer thought that might get him out of any legal difficulty. The Bench said there had been a technical infringement of the law, although they quite appreciated what Mr. Neville had said. There would be a nominal penalty of 20s., including costs.

Commenting on this, *The Mark Lane Express* says:

"This case shows the dangerously uncertain state of the law. Mr. Neville is a man of high probity, and his loaves not infrequently exceed the exact weight. This is, however, no satisfaction to the neighbour next door who gets the short loaf. Surely equal weight can be managed at a first-class bakery. There is beyond this a serious point involved in the suggestion that 'bills should be printed to show that the bread was not sold by weight.' This suggestion emanated from the County Council. Are we to understand that a baker has only to send out handbills to say that he does not sell by weight in order to be secure against the requirements of the Food Act with respect to the weight of his loaf?"

FAT GLOBULES IN MILK.

ACCORDING to a note in *The Times*, Storch, a Danish investigator, has lately adduced evidence which favours the revival of the theory that a delicate membranous envelope exists around the fat globules of milk. The theory is that the violent concussions induced by churning cause the rupture of these delicate membranes or bladders, and thus facilitate the running together of their oily contents to form butter. In the face of fresh evidence, however, the belief in the existence of the envelope declined, and the theory gained ground that the globules of fat suspended in milk are really naked, and that when they become aggregated into large granules in the process of churning they run together in much the same way as two globules of quicksilver on contact one with the other unite to form one homogeneous globule. Storch now claims to have demonstrated the existence of a "slimy albuminous membrane" around each fat globule as naturally held in milk by staining them with a solution of picocarmine, the colourless globules being then seen through the microscope as if they were surrounded by a narrow, faint-red border. The average thickness of the membrane is calculated to be about one-twentieth of the diameter of the globule. The globules, as a whole, consist of 72.5 per cent. of pure fat and 27.5 per cent. of albuminous membrane.

COLD CONDENSATION PROCESS FOR FOOD STUFFS.

MILK has been successfully condensed by removing the water in the form of ice rather than steam, care being taken to allow the ice to form on the surface only, and to break the surface ice frequently, so that fresh liquid is presented to the cold air. As the bulk of ice increases the broken mass is gradually submerged. The product is finally standardised, and is said to be fairly representative of milk freed from the bulk of its water. It is free from cooked flavours and has a milk aroma which is true to the milk from which it is prepared. Moreover, it mixes easily with water, and cream will separate from the mixture in the same manner as from untreated milk. B. F. McIntyre is of opinion that the same process can be employed with advantage for condensing liquids containing nutritive peptones and albuminoids, solutions possessing peculiar odours and flavours, or very dilute solutions of active constituents. It is stated that peptones have thus been

reduced in bulk, and fresh meat juice condensed to a syrupy consistence without change. Fruit juices and coffee extract can also be concentrated without the slightest impairment of the quality of their flavours, and with proportionate concentration of flavour, whilst aqueous malt extract can be condensed with but slight loss of active diastase in the conversion of starch. A solution representing twice its bulk of malt, and containing about 35 per cent. of maltose sugar and extractive, was found to have a diastasic strength equal to the conversion of four times its weight of starch.—*Journal of Pharmacology*, iv., 294.

WHAT ANALYSIS HAS COME TO.

THE following advertisement, now appearing in the press, may well strike awe into the hearts of public analysts, for it means (if it means anything) very hard times for them. We trust the chemistry, bacteriology, and botany of the respected milk and cream purveyors cum analysts, bacteriologists, and botanists is not so befogged as their grammar. If it is their chemistry, etc., etc., must be of a fearful kind. Anyhow, we sincerely hope their milk and cream is purer than their English in the following announcement :

CAUTION
BY THE MEDICAL OFFICER OF HEALTH
AS TO THE
WATER SUPPLY OF COUNTRY FARMS.

J. CASE & SON,
MILK & CREAM PURVEYORS,

call Public Attention to the fact that, through the apathy and inaction of Rural and County Authorities, two members of the family of H. W. Case the Proprietor and himself, being qualified in Chemistry, Bacteriology, and Botany, make ANALYSES OF WATER obtained at Periodic Times from the FARMS on their Service, though many of them use only Company's Water, thus ensuring, as far as possible, a Safe and Reliable Milk Supply.
Oxford Street, Cotham.

SCOTCH WHISKY AND OTHER FRAUDS IN INDIA.

The Indian Daily News says: Mr. Baker refers to Scotch whisky 'made in Germany' in the following terms: "Seven cases occurred in which consignments of German imitations of brandy, whisky, gin, port, and other liquors were dealt with. These were usually got up in imitation of the bottles and labels of the genuine article. In some cases the labels bore the words 'Made in Germany,' but the corks and capsules were not branded with the country of origin. One case, in which a consignment of 153 cases of German 'whisky,' which involved an undoubted fraud on the public, was confiscated, occasioned a good deal of local interest, and a number of well-known firms wrote to the papers to disclaim any connection with the importation." The incident referred to will be remembered by readers of *The Indian Daily News*. Mr. Baker further writes: "Twenty-two cases related to consignments of woollen shawls of German and Austrian make labelled with the English words, 'all wool,' with no indication of the country of origin. In one case a shipment of cotton shawls was imported from Germany by Messrs. —. The goods were got up to closely resemble wool, and ticketed with the English words, 'all wool,' and bore labels marked with sizes which were largely in excess of the actual measurements. The explanation given by the importers was not satisfactory, and, as it was a bad case of fraud, and the importers had been penalised on nineteen previous occasions during the past two years, a heavy penalty of Rs. 500 was imposed." The public interests, we think, would have been better safeguarded had the name of these dishonest importers been disclosed.

THE OCCURRENCE OF TUBERCLE-BACILLI IN COMMERCIAL BUTTER.

THE evidently frequent occurrence of the tubercle germ in milk has naturally led to a suspicion that it occurs in milk-products, especially butter and cheese. Several bacteriologists have made investigations in this line, some of whom have reported positive results. The investigation is far more difficult than is appreciated by the public at large. There are bacteria which so closely resemble the tubercle-germ that elaborate inoculation experiments are required for distinction.

The latest publication on this topic that has come to our hands, is a paper by Dr. Lydia Rabinowitsch, Director of the Bacteriologic Laboratory of the Woman's Medical College of Pennsylvania. It was published in a recent number of the *Zeits. f. Hygiene*, etc. The work was done partly in Berlin and partly in Philadelphia, and included samples of commercial butter, collected in both markets, thirty in the former and fifty in the latter. The experiments were conducted with all approved precautions. The author's conclusions are as follows: The true tubercle-bacilli were not found in any sample, but an organism closely resembling it was frequently found. The occurrence of this simulating organism justifies the conclusion that some observers have been misled by it, and the positive results reported are thus in part untrustworthy. It is not said that tubercle-bacilli do not occur in butter, but the occurrence is so rare that it does not constitute a matter of great sanitary moment, even though its infection of milk is so common.

The investigation indicated the frequent occurrence of common irritating bacilli in the butter samples, but we are, of course, not surprised at this, nor at the fact that observers who have limited themselves to mere determinations of the number of living bacteria of all kinds present in butter, have published rather startling figures. It seems possible that in this field oleo-margarine has the advantage over butter, namely, that the former is not likely to contain so many nor so dangerous bacteria as the latter.

It is gratifying to know that as far as commercial butter is concerned, there is little likelihood of infection from tuberculosis.

THE REFRIGERATOR AGAIN.

MILK ADULTERATION BY A DERBYSHIRE FARMER.—At the Derby County Police Court, Thos. Jeffreys, farmer, of Thurvaston Stoop, Long Lane, was summoned for selling milk adulterated by water to the extent of 40 per cent. Mr. R. S. Clifford prosecuted, and stated that the defendant supplied all his milk to the Callow Park Dairy. A sample was taken by Capt. Sandys, inspector under the Food and Drugs Act, and the analyst discovered 40 per cent. of water. It was the worst sample he had ever had! Mr. J. T. Wykes, for the defendant, contended that the adulteration was caused by a hole in one of the pipes of the refrigerator. The magistrates convicted, and fined the defendant £5 and costs.

SALFORD'S NEW MEDICAL OFFICER.

The Health Committee had considered applications for the vacant post of medical officer of health. Of these 46 were received. The number was reduced to ten, then to three, and finally to two. The Health Committee were stated to have been equally divided in opinion as to which of these gentlemen should receive the appointment. Consequently the Chairman of the Committee made no definite proposal, and left the Council to decide between the two candidates. They were Dr. Garstang (Knutsford) and Dr. Tattersall (Oldham). A motion that the candidates, who were in attendance, should come before the Council was, however, negatived. A remark having been made that the Chairman of the Health Committee should have given a casting vote in committee, the Chairman (Mr. Huddart)

now said that he would have voted, if at all, in favour of Dr. Tattersall. The matter was brought to a point by Mr. Jackson moving and Mr. Alderman Snape seconding a resolution that Dr. Tattersall be appointed. Mr. Alderman Rudman moved and Mr. Denson seconded, on the other hand, the appointment of Dr. Garstang. After some interrupted discussion a vote was taken on the amendment, which was rejected by 39 votes to 10. The original resolution was then carried, appointing Dr. Tattersall medical officer at a salary of £500 a year.

CORRESPONDENCE.

DAIRYMEN AND THE NEW ADULTERATION ACT.

To the Editor of FOOD AND SANITATION.

SIR,—I will thank you to find room, if you can, in your esteemed journal for these few remarks upon the dairymen's prospects in the new Adulteration Bill of the coming Session. The meeting called by the British Dairy Farmers' Association for the purpose of passing a resolution supporting the suggestions of the Select Committee on Food Products, with the exception of the two clauses suggesting increased penalties, will, I think, improve the present law very much, and my object in writing this letter is that I might, by bringing the claims of the dairymen before the public, by stating the real facts and the real difficulties that beset the dairyman in the performance of his duties, enlist the sympathy of some Members of Parliament.

The dairy trade is already overweighted with difficulties that no other trade has to contend with, and of which the public seem to have no knowledge; yet it is from this source that much of the stigma that attaches to our trade proceeds.

Every other trade or business that comes within the sphere of the Sale of Foods Acts but ours has a fair and reasonable control over the article of food they buy or sell, and has some opportunity of obtaining some knowledge of its quality before selling it. The dairyman cannot take any of these wise and prudent precautions to protect his name and reputation. He has simply to work in the dark, dependent upon the farmer for his milk supply and for its quality, and at the time of selling it has really no knowledge of its quality. Then there is the great fluctuation in the quality of the milk, which at times is very risky indeed to dairymen. Then we have the unaccountable errors in the analysis of milk, which confirms the fact that public analysts are only human. The want of an official standard for milk has landed hundreds in the police courts; we also want one uniform method of analysis.

Then, of course, there are the cows. The dairyman is very much dependent here upon them; if they won't, or cannot, give milk of the nature, substance, and quality required by the inspector. All these are serious obstacles to overcome, but the case of the cows is very serious indeed; then, in addition to these troubles, it is impossible for him to prove he sold the milk as he received it, for he has had it in his sole possession. Under these circumstances we contend it is the duty of Parliament to make such special provision in the new law that will enable a dairyman to clearly prove that he sold his milk in the same state and condition as he received it. We want a better means of defence than the present procedure of the Acts of Parliament provides; we contend the law has dealt very harshly with us. It has placed us in this difficult position, that we have to sell milk that is sent us without the means of proving we sold it as we received it. If the law places us in this position for the public good, surely it is only reasonable and just that it should find a practical way out of the difficulty, that innocent dairymen shall not be punished for offences they have never committed.

Sir William Foster, M.P., chairman of the Select Committee on Food Products, speaking to Mr. Brown, a witness,

said: "We are perfectly willing that the honest trader should have every possible protection and means of defence, and being in the best possible position at the earliest possible moment."

These are noble words, and bring hope to the dairyman, and they accurately describe our position. The remedy we suggest is both simple and effectual, and increases no one else's burdens. We want the Amendment Act of 1879 so amended as to empower the food inspector who buys adulterated milk within his own district, to follow it up to the place of delivery, and such officer shall submit the sample or samples to the public analyst of his district. Milk is delivered in one district, but it has to be sold in many districts; but if sold out of the district where it is delivered, the law then fails to protect the dairyman.

Inspectors have now the power to go five hundred yards over their boundary, and can take samples. For years we worked the Amendment Act on these lines, and most beneficent they proved to the dairyman; but it broke down because the analyst could not analyse the samples taken, as he was only the analyst of the district; but it is an infallible proof that it is only technical obstacles that block the way to a just and beneficial change of the law that could possibly be made, and a real boon to the dairy trade, as no miscarriage of justice follows in its wake.

Our experience teaches us that the only way that will remove the difficulties that now prevent the dairyman being able to prove he sold his milk in the same condition as he received it is by empowering the inspector who buys the adulterated milk to follow it up to the place of delivery. It would then receive the same prompt attention as if the milk had been delivered in his own district. It would then only require the services of one analyst, and it would also protect dairymen in every district to which his business called him.

Surely it is a very reasonable request to make, that if my business calls me into three or four different places, I should still have the protection of the law; on the principle of English fair play I think this should be so. I am selling the farmer's milk just as he has sent it to me, on the understanding that it is unadulterated, and if the inspector of one of these places takes samples and finds them adulterated, to take proceedings against me *only* because my milk is delivered in the next district, is unjust to me, and incomprehensible. I say it is without dispute that the carrying out of this law is the real source of our success in diminishing adulteration; 1,267 samples were taken here last year, with 32 samples adulterated. And it is just the same with those towns that work upon the same lines.

The Select Committee on Food Products have, with great kindness and forethought in the interest of defendants, suggested that the fifth clause of the Margarine Act should be inserted in the Sale of Food and Drugs Act, so that no innocent man should suffer if he can prove to the satisfaction of the magistrate that someone else committed the offence. We ask that this clause shall apply to dairymen who prove that they have been supplied with adulterated milk without their knowledge, consent, or connivance. We repeat it is only reasonable this clause should apply to dairymen in these cases. If Sir William Foster's noble words of wisdom have any practical meaning, they must apply to our cases. For greater proof no man could possibly give than we give of our innocence.

I think the suggestion to increase the penalties under the Sale of Food and Drugs Act needless and absolutely unnecessary. The Select Committee report that when the law has been well administered they have produced beneficial results, and adulteration has diminished. The magistrates are the best judges of the fines to be inflicted; they hear the whole of the evidence, and see the surroundings of the case. The law has been well carried out here; no one could have had a better experience than we have had in the working of the law. It is true there are many ten shilling fines, but they are only trivial cases—poor people selling a few quarts of milk a day.—Yours, etc.,

ROBERT EDGE.

Manchester.

**To the Grocers, Provision Merchants, Pastry-
Cooks, Confectioners, and the Public
of the United Kingdom.**

TRADE



MARK

“LE DANSK”

MARGARINE.

A PERFECT, PURE & WHOLESOME BUTTER SUBSTITUTE, for Table use and every description of Pastry. In Colour, Flavour, and Texture, equal to the Best Brands of Butter, costing one-third less. This unique product stands far above other makes, and has received honour everywhere.

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**HAS THE LARGEST SALE IN THE WORLD.**  
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“THE LANCET,” the leading Medical Authority of the World, says:

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Food & Sanitation

THE PUBLIC ANALYTICAL JOURNAL.

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LONDON: SATURDAY, DECEMBER 25, 1897.

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Food and Sanitation.

SATURDAY, DECEMBER 25TH, 1897.

THE STANDARD OIL COMPANY'S GAME IN GERMANY AND ENGLAND.

Now that the immaculate "Made in Germany" Home Office expert, Dr. Duprè, has joined the ranks (happily few) of the low flash 73° advocates, the following revelation of the methods of Dr. Duprè's new friends is not devoid of interest. The American *Paint, Oil, and Drug Review* says:

"A recent cablegram from Germany states that the Standard Oil Company has decided to introduce into that country what is known as the 'factor' system. This means that the oil will remain the property of the Standard until it is distributed: and dealers will simply act as agents, getting their regular commission and rebates according to the amount of business that they handle. While the

'factor' system is aimed at the Russian oil competitors, with a view of driving them out of Germany, it is intended to unfavourably affect the interests of other American distributing concerns. It is declared that the Standard has practically got control of the biggest outside concern in Germany that has been handling the American product, namely, the Mannheim-Bremen Petroleum Company, and the Standard is said to exclusively furnish that company with the oil which the latter places on the market in Germany and several other European countries. The Standard made terms with the Mellon oil interests, who built the Crescent pipe line to Philadelphia and long did a flourishing export business with France. Finally the Standard absorbed this company, and the 'factor' plan, or something very similar to it, is now in operation in France. The monopoly in that country is now more firmly entrenched than ever. Such, it is asserted, will be the ultimate outcome of the German situation. The price of oil in Germany is very low on account of competition with the Russian product, but an advance is looked for as soon as the 'factor' plan is put into operation. The chief advantage of the Russian refiners over American dealers has been that they were able to undersell the latter, but now the price of the American oil is so low that there is a general inclination to give up the Russian. Having been once committed by contract to the 'factor' policy, the dealers will be in a position where they will be unable to handle both grades, and there is said to be no doubt which they will choose to retain. During the past year Russian oil has been fast losing ground in Germany."

We have no wish to raise the cry of "No foreigners need apply" for positions of importance under the British Government, but the facts must be clearly put and clearly understood. No shuffling of the cards and no scientific jugglery must be permitted to do what was done in 1868. As our contemporary, *The Chemical Trade Journal*, clearly reveals the position—

"Affairs stand thus at present. Sir F. Abel has 'given himself away' by advocating safe oil for the War Office and unsafe oil for the people; J. Anthony Mundella has died, and with him the hopes of the low-flash party nearly died also; Sir J. Fergusson, who, in the face of the protests of two authorities to one, suddenly revoked the 100 deg. test in the old Petroleum Bill (to suit the ends of the S. O.) just before it was presented to the House, evidently does not care to toy with edged tools again; and so Dr. Duprè, the chemical adviser to the Home Office, has suddenly been brought out as a champion of low-flash oil.

"Up to now, his attempts to advocate low-flash oil have either exposed his absolute ignorance of what he is talking about, or a perversion of scientific facts that is no credit to the members of the Institute of Chemistry, of which he is a Fellow.

"In addition to this, he actually has the audacity to state that it is of no use for the public to try and get the flash point raised by law from 73° Abel to 100° Abel, for our legislators would not upset the trade by making the change. What trade? And who is Dr. Duprè to dictate as to what laws are to be changed and what left alone? It is not for him to settle, but for the Committee of Inquiry to recommend and Parliament to decide.

"Let the Press and the public learn a lesson from the way the Petroleum Association 'managed' Sir J. Fergusson, at the ninth hour, over the safety test advised by Abel, Attfield, and Letheby in 1868. Then the subject was one for experts only. The death roll compiled in the intervening years has made it a public matter.

"Despite Dr. Duprè and his half-dozen influential supporters, such men as Prof. Ramsay, Lord Kelvin, and Sir H. E. Roscoe (backed by every open-minded chemist in Great Britain, Russia, and Germany), have given directly opposite testimony.

"Let the public and our Parliamentary Committee lay to heart the fact that despite Germany being held up as a justification of low flash oil, the Imperial Government is prepared to 'proceed ruthlessly against the abuses of the S. O. Co.' The trade that Dr. Duprè would defend is an

insult to the intelligence and integrity of our Parliamentary Committee, and a reproach to the country.

"He seeks to bolster up an iniquitous monopoly conducted with a lawlessness that is notorious throughout the world.

"An eminent representative of the American oil trade has allowed the daily press to state that they only seek to 'meet the demand of English consumers.' They do not. They only chuckle over burning them to death at a profit, because the 'powers that be' will not let our laws be adjusted in accordance with the progress of science and the calls of equity and public safety.

"No one knows better than the American oil crew that Java petroleum is supplanting their dangerous rubbish in the far East, Russia is fighting them in other markets, Galicia is driving them out of Central Europe, and that Great Britain is their last hope as an outlet for this dangerous oil. Russian oil has been *promised* with a flash point of 100° Abel (the standard of safety we have fought for this last five years) *at present prices*, and if the law is changed the refuse sent from America must be refined into decent oil. This is why the trade must not be so upset. If American oil were forbidden the country to-morrow the poor man would still get his oil in abundance at present prices, and *safe* into the bargain.

"This is no vain boast, and the American crew knows it. Let the Press give voice to facts and not the inspired prevarications of millionaire magnates. There are plenty of honest advocates of high flash oil, but it would seem that Diogenes must have arrived at his final decision about men after looking among low flash advocates only.

"We have nothing to gain, and, possibly, much to lose, by thus laying the bare facts before the public, and yet how hardly are our words credited.

"Dr. Duprè's cry of not so upsetting the trade is preposterous. The Government have already imposed restrictive and burdensome laws on India-rubber makers, paper stainers and enamellers, dry cleaners, slag grinders, slag wool makers, boot factors, file cutters, glass polishers, cutlery grinders, cotton reel labellers, paint and white lead makers, ship-builders, galvanisers, pottery glazers, enamelled-ware makers, aerated water bottlers, lithographers, flour millers, and many other traders. What for? To protect the health of the workers; and yet they will not save 365 lives a year, and thousands of pounds' worth of property, by protecting the public against this low-flash oil (73° Abel).

"They dare not burn such oil in their lighthouses or barracks. Sir F. Abel will not let them. It must be 102° Abel test, or more. Yet oil which is inflammable at 73° Abel test—a common summer temperature—is safe enough for the people; the ignorant, careless, and reckless poor of Great Britain. This is what we want rectified, and the truth shall not be perverted and Trelawny executed at the last moment, this time. If the attempt is successful, every medical officer of health, every open-minded chemist, and nearly every coroner in the country will know the reason why, to say nothing of the public."

No matter whose be the reputation that must be "blown upon," or whose the disgraceful exposure, this cursed villainy must be stopped. Parliament has yet honest, fearless exponents of truth, and science, prostituted though it has been and is in many quarters, still boasts of men who place principle and the public welfare above the bloodstained bribes of American millionaire dynamitards and explosion planners. Press, pulpit, platform, and Parliament have been educated at last upon the question, and to-day the honest indignation of English hearts is aroused against the villainy. American bribes shall not hand over English men, women, and children to be roasted alive one per day to swell the profits of the most unscrupulous trust, the most unctuous hypocrites, and the vilest gang of sanctimonious contrivers of murder and arson unhung. Let America keep its Tammanys. Englishmen to-day know too much of the real "deadly 73 degrees" to be "roped" or "bulldozed" into serving the ends of the rascals, however plausibly the defence for plunder and roasting alive of the poor may be put.

FROZEN MEAT.

THE industry of the frozen meat trade from this country has for some time assumed such proportions that the Government of the Colony (of Victoria) has instituted experiments with regard to the best means of obtaining the highest economic food value from these products for domestic purposes. The Government exhibit an anxiety to disseminate information bearing upon the wholesomeness and adaptability of this food for general consumption. Experiments which have been made confirm the opinion that the proper handling of frozen meat renders it indistinguishable in flavour, digestibility, and nutritive value from that of meats grown at home. These experiments go to show that extreme cold produces no chemical alteration. Freshly killed carcasses of mutton were placed in a chamber at a temperature of from 5 to 10° F. The cold retarded the coagulation of the muscle plasma, and after having been kept four months in the chamber, the carcasses were thawed, and rigor mortis, which had been for that time inhibited, commenced. After having been subjected to the process of freezing the tissues undergo a physical change. They become softer and looser, and are therefore more easily digested. One of the objectionable features stated to be associated with the freezing of meat is that of "bone stink." Bone stink is not created during the process of freezing. It is occasioned by the agency of putrefactive micro-organisms. Micro-organisms have reached the surface of the change, and by their growth they produce chemical alteration in the meat, giving the meat an offensive odour and disagreeable taste. In those cases of bone stink where the stink was detected in frozen carcasses only after thawing, the meat had commenced to undergo the putrefactive change before having been subjected to the process of freezing. Cold arrests putrefaction, but does not destroy it. Then, as soon as the meat is removed from the cold chamber and thawed, and kept at the ordinary temperature of the atmosphere, putrefaction, which may have been arrested for months, again begins, and progresses more and more rapidly. Bone stink cannot possibly be created by freezing. If the carcasses were perfectly sound and wholesome when placed in the freezing chamber, then no matter what length of time it is kept there at a low temperature, it will, when thawed, be found to have suffered no deterioration. When carcasses are hastily transferred to the chilling rooms, particularly during the summer, no complaints of bone stink occur. It has been maintained, particularly by those engaged in the export trade, that bone stink originated from the exterior portions freezing solidly and enclosing a less frozen interior zone. The experiments have disproved this. Freezing does not rupture sarcolemma of muscle. There is some slight escape of the watery constituents of the meat, and also an escape of some of the extractives, in the escaping fluid very little indeed of the myosin and serum albumen is found. Meat that has been subjected to the process of freezing should be gradually thawed, and should not be divided into butcher's joints until the thawing has been thoroughly accomplished. It will then be found that there is less transudation of the sanguineous fluid, and consequently a diminished loss of extractives, serum albumen, and myosin. Moreover, the cooking of this meat requires particular attention; it should be plunged into boiling water; the heat coagulates the albumen of the surface of the joint, and prevents the exudation of fluid containing extractives. Even before roasting the joint it should be momentarily dipped into boiling water.—*British Medical Journal*.

THE SANITATION OF PUBLIC BUILDINGS.

THE Clerkenwell Vestry has had under consideration a letter from the Vestry of Westminster stating that they recently had their attention called to cases in which property, in the occupation of certain of the Government Departments, had been found defective in its sanitary condition, or cases in which public inconvenience and danger had arisen through such property, and the occupants thereof

t being subject to the provisions of the Public Health Act, 1891, they were of opinion that much might be done to minimise such inconvenience and danger, without impairing the exemption secured to Government property, by co-operation between the Executive departments and the Sanitary Authorities, and had therefore written to the Government, asking in the interests of public health, for access being afforded to the Sanitary Officers of the Local Authorities to Government Institutions, to obtain a systematic co-operation between the departments having the control of the Government buildings and the Sanitary Authorities. Though no difficulty had been experienced in Clerkenwell, they (the committee) deemed the suggestion proper one and recommended "that a letter be sent to the Government in support thereof."

Mr. Schieb moved the adoption of the report. The only Government buildings in the parish were the Parcels Post Office, the King's Cross Road Police Station, and the Post Office near the "Angel." No difficulty had been experienced in Clerkenwell and they still thought this communication a proper one.

Mr. Putterill wished to know was there anything in a general Act which exempted Government buildings from sanitary inspection. The Public Health Act was the most recent legislation on the subject. He certainly thought it was a matter which deserved very careful consideration.

Dr. Glaister: Under the Metropolis Local Management Act, Government property is exempt.

Mr. Wildbore thought that the Local Sanitary Authority should have power to claim the right to examine these buildings.

The recommendation of the committee was adopted.

THE WATER AT SPIRIT PRICE TRADE.

At Mildenhall Petty Sessions, Walter Harding, landlord of the "Plough Inn," Lakenheath, was summoned for selling a pint of whisky 5 per cent. below the legal strength, or 30 per cent. under proof, the charge being brought against him by Supt. Reeve, Inspector under the Weights and Measures Act. Mr. C. E. Salmon appeared for the defendant. Samuel Garnham Reeve, after proving his appointment as inspector, said on November 3rd last he called at the "Plough Inn," at Lakenheath, and asked the landlady if her husband was at home; she said "No." He then asked for a pint of whisky, which she brought in a mug, placed it on the counter, and said the price was 2s. 8d., which he paid. He then told Mrs. Harding that the whisky was for analysis, and divided it into three parts, one of which he took to the county analyst, one he left with Mrs. Harding, and one he kept himself. Last Wednesday week he received a communication stating that the whisky contained 5 per cent. more water than was allowed by the Act. In cross-examination the superintendent stated that he asked for the whisky in the front bar; did not ask for any particular kind of whisky, and he noticed that Mrs. Harding mentioned about the price, and he told her the price he usually paid, she agreeing to take that price. He had nothing to say as to the conduct of the defendant, who had been landlord of the "Plough" about four years. He had not seen any notice in the house about the spirits being diluted. He had not seen the notice now produced by Mr. Salmon. P.C. Buck was called, and said that he had never seen the notice at the "Plough Inn," although he had frequently visited the house. Mr. Salmon contended that from the exposed appearance of the notice he produced it had been hanging up somewhere in the house. It was not, he admitted, hanging up in the bar where Superintendent Reeve bought the whisky, but it was hanging up in the bar-parlour, where the customers were in the habit of taking their whisky. He quoted a case decided by the High Court, that it was not necessary that individual attention should be called to the notice. There was no intention to commit fraud. Defendant stated that he had never had any complaints made by his customers about the strength of the whisky he sold. The notice produced was hanging in the

bar-parlour when the superintendent called, and had been there for four years, but customers in the bar could not see it. The Bench decided that the notice was not sufficiently public, and fined defendant 5s. and 8s. 6d. costs.

At Loughboro' Petty Sessions, James Hands, licensed victualler, of Castle Donington, was charged with selling adulterated whisky. Deputy-Chief Constable Smith stated that he went to defendant's house, and bought some whisky. He afterwards submitted a sample to the public analyst, who gave a certificate showing that it was $2\frac{1}{2}$ degrees below the legal standard. Defendant pleaded not guilty to selling the whisky with intent to defraud the public. He stated that the strength was lost by evaporation and with pouring it from one vessel to another. Fined £2, including costs.

At Cheltenham, Frederick E. Miller, of the "Great Western Hotel," was charged with selling brandy under proof. P.C. Allen, of Gloucester, produced the county analyst's (Mr. Embrey's) certificate of the adulteration. The brandy was 27.6 degrees under proof, the limit allowed by law being 25 degrees. Defendant said he was short of brandy at the time, and had to resort to a cask containing only about three pints. He supposed that the weakness of the brandy was due to evaporation. Fined 10s. and costs 23s.

At Church, on December 16th, Richard Shacklock, licensed victualler, of the "Griffin's Head" public-house, Burnley-road, Huncoat, was summoned for selling adulterated rum. P.S. Lewis deposed to visiting the house on the 19th ult., when he purchased a pint of rum, for which he paid 2s. 4d. On submitting samples of the same to the public analyst it was found to contain 64 per cent. of rum and 36 per cent. of water or 11 per cent. excess of water. Defendant gave no explanation in defence, and the magistrates considered the case a serious one, and fined defendant 40s. and costs.

MEAT.

At Clerkenwell, on December 17th, Frederick John Bucknell, of Ashton Farm, Morebath, Devon, was summoned for depositing, on November 11th, at Venables' shop, Cowcross-street, Smithfield, three quarters of beef that were unfit for human consumption. Mr. Hall prosecuted on behalf of the Holborn District Board of Works, and Mr. D. Ricketts, jun., appeared for the defendant. The quarters were portions of an old cow that had suffered from tuberculosis, and were consigned to London as "offal meat." Mr. Horace Smith imposed a fine of £5 and £5 5s. costs.

MARGARINE.

At Lambeth, on December 17th, William Jones (trading as D. Morgan), of Old Kent-road, was summoned by Alfred Ward for selling, to the prejudice of the purchaser, a certain article of food, to wit, half a pound of butter, which had been adulterated by an admixture of 90 per cent. of margarine, so that the said butter was not of the nature, substance, and quality of the article demanded by the purchaser. Mr. Ricketts supported the summons on behalf of the Butter Association, and Mr. Romain defended. Two officers of the association gave evidence to the effect that a sample of tenpenny salt butter purchased at the defendant's shop proved upon analysis by the public analyst to contain 90 per cent. of margarine. It was said that the name over the shop was "D. Morgan," but that the defendant said it was his own. Mr. Hopkins ordered the defendant to pay a penalty of £20 and £3 3s. costs.

At Sunderland, on December 3rd, Wm. Brantingham, a provision dealer, was charged with selling margarine represented as butter, and with exposing margarine for sale not labelled as such. The Town Clerk (Mr. F. M. Bowey) prosecuted, and Mr. Isadore Isaacs defended. Defendant pleaded guilty to both indictments. Mr. Bowey said that on

October 28th Inspector Pennock entered the premises of defendant, 72, High-street East, and asked for a pound of butter. The reply was, "Best, sir?" The inspector assented, and pointed to a slab of butter, which was labelled in block type, "Finest Danish, 10d," saying "I will take it off that." He was supplied by the person at the counter, in the presence of the manager. They were then informed of the purpose for which it was intended, and the sample was duly sealed up. The analysis showed it to be made up of 90 per cent. of other matter, not butter; in short, that the sample was not butter, but margarine. Mr. Isaacs, in extenuation, said that his client had only pleaded guilty technically. In reality, he might say Mr. Brantingham, who took, as they knew, a great interest in public matters, had placed, five years ago, in charge of the shop, a person in whom he deposited great trust, and who had served him faithfully for fourteen years previously. His client admitted that he should have more carefully overlooked the shop, but personally he knew nothing of the affair. Mr. Brantingham was put in the witness box, and corroborated the foregoing statement. In cross-examination, witness said that the substance which was sold at 10d. per pound cost him 7½d. He did not consider this an exorbitant profit. The Bench, after consultation, said that, taking into consideration the fact that Mr. Brantingham had pleaded guilty, they would fine him £10 and costs.

WALTER KIRKHAM, grocer, Princes Road, Middlesbrough, was charged, at Middlesbrough, on December 15th, with exposing for sale margarine, without having it labelled in accordance with the Act, which stipulates that all margarine must be so labelled as to be visible to the purchaser, and also with selling as butter a substance that contained 70 per cent. of fats, not butter. Mr. G. Barnley prosecuted, and Mr. J. W. R. Punch defended. Mr. Geo. Anderson, Sanitary Inspector, stated that he visited defendant's shop and saw two masses, which he took for butter. One was upon a meat dish, and he asked for a pound of that butter. After some hesitation defendant said that it was not butter, but margarine. Mr. Anderson requested that a label be affixed before he left the shop. The place was searched all over for twenty minutes, but without the label being found. He then bought a pound of the other butter, which on analysis by the borough analyst was found to contain 70 per cent. of fats, not butter. Defendant pleaded guilty, and Mr. Punch said that Mr. Kirkham found the label amongst the wrapping paper on the shelf under the butter counter some time after Mr. Anderson had left. Mr. Punch referred to defendant's previous good record, and hoped the Bench would deal leniently. The magistrates considered the case was a bad one, and inflicted a penalty of £4, or a month.

In the second case, Mr. Kirkham, under examination, stated that he had purchased the butter from the Yorkshire Wholesale Supply Co. He had not traded there before, having previously, and since, dealt with Messrs. Jervelund and Clephan, and had given the order to assist a friend of his who had just commenced to travel for the firm. He received a warranty that it was pure butter, and he had sold it as such. By Mr. Barnley: The butter sold to the Inspector was that received from the Yorkshire Wholesale Co. The Bench imposed a further fine of £4, including costs, or a month.

At Liverpool, on December 15th, Stanley J. Mitchell, of 122, Mill Street, was fined 40s. and costs for exposing for sale, on the 4th inst., a piece of unlabelled margarine. Several previous convictions were recorded against the defendant. Mr. Baker proved the case.

At Southwark, on December 17th, a tradesman named Griffiths, of Southwark Bridge Road, defended by Mr. Maxwell, was summoned by Chief Inspector Edwards, of St. George's Vestry, for selling as butter that which contained 88 per cent. of substance other than butter fat. For the defence it was alleged that the inspector asked for "a quarter of a pound of tenpenny," and this was supplied him, no mention being made of butter. This was denied, and a previous conviction of £5 in June last was proved against

the defendant. Mr. Slade now imposed a fine of £10 and 12s. 6d. costs.

At Glasgow, on December 16th, before Sheriff Boyd John Fleming, provision merchant, 144, New City Road was charged with having, on October 27th, exposed margarine for sale by retail without it being labelled in a manner clearly visible to the purchaser. He pleaded not guilty, and was defended by Mr. James Macdonald, writer. Mr. John Lindsay, interim clerk of police, prosecuted on behalf of Mr. Peter Fyfe, sanitary inspector. Evidence was given by Inspectors Armstrong and Hamilton that while four paper labels were in the right position on some of the lumps of margarine on the shelf behind the counter there were four tin labels on sixty-five lumps of margarine, and the lettering on these was not visible to the purchaser, as the labels were stuck into the margarine edgewise and partly buried. For the defence, Edward Macleod, principal shopman to the respondent, said that the labels were put upright at half-past seven in the morning when the shop was opened, but it was a dark day and the gas was burning all forenoon. The heat making the margarine soft three of the labels had fallen forward by the time the inspectors called, soon after eleven o'clock. One of the labels was readable. There was a notice in the shop that all margarine tickets must be kept up so as to be at all times visible from the outside of the counter. The Sheriff, having found that the offence had been committed, a complaint was then heard, at the instance of Mr. Fleming, against Edward Macleod, the shopman, as being the actual offender. This was found proved against Macleod, the consequence being that Mr. Fleming was found not guilty. Mr. Macdonald, speaking on behalf of Macleod, asked his Lordship to deal leniently with him, as shopmen were not hitherto aware that they were personally liable for such offences. His Lordship limited the fine to the amount of expenses incurred by the prosecutor, £1 12s. 10d.

Robert Roberts, provision merchant, 546, Springburn Road, admitted having exposed margarine for sale without it being properly labelled. He said that the offence was due to the carelessness of the shopman. The Sheriff fined him £1 10s., being the amount of the prosecutor's outlays.

MILK.

At Bedford, The Royal Aylesbury Dairy Company (manager, Mr. A. T. Tew) were charged with selling a quantity of milk from which the butter fat had been extracted at Kempston, on November 21st; and Frederick White, milk vendor, of Bedford, was charged with a similar offence. Mr. W. W. Marks (Clerk of the Peace) conducted the prosecution, and Mr. C. Stimson defended. The case against the company was taken first, and in his opening statement Mr. Marks said that Dr. Stevenson (Public Analyst) reported that the milk in question was deficient in butter fat to the extent of 16 per cent. Mr. Stimson had given notice that he would submit that a written warranty was given with the milk to the effect that it was pure milk with all its cream, and he (Mr. Marks) pointed out that if the warranty were given with the particular milk in question and not with milk generally it was an answer to the charge. P. S. Mason (Inspector under the Foods and Drugs Act) stated that on Sunday, November 21st, he met White, who is in the employ of the Company at Kempston and bought a pint and a half of milk from him, subsequently sending the required portion for analysis. Mr. Stimson admitted the facts and stated that his defence was that a written warranty was given with the milk, as required by Section 25 of the Act. There was a label on the can, dated November 20th, 1897, stating that the contents were "warranted pure new milk with all its cream," and signed by the person with whom the company have a contract for the supply of milk. Mr. Tew, of Leicester, manager of the company, stated that among the persons from whom the company obtained their milk was a Mr. Richard Harrison, of Newton Harcourt, near Leicester, with whom he had

made a verbal contract for the supply of milk every day, to be put on rail at Glen Station. He identified the writing on the label as that of Mr. Harrison's son, who managed the business when his father was away, and who undertook the sending of the milk and the signing of the tickets. Replying to Mr. Marks, Mr. Tew stated that the county authorities could rely on the support of the company if they withdrew the present charge and chose to take proceedings against any other party. Richard Hall, a porter-guard in the employ of the Midland Railway Company, said that on November 20th he brought a passenger train from Leicester to Bedford, due at Bedford at 8.33 p.m. The train called at Glen, where a can of milk was put in the van, it having attached to it the label produced. Henry Read, Bedford foreman of the company, said that on the morning of November 21st, before seven o'clock, he went to the Midland Station and found the can with the label attached to the handle. He immediately emptied the milk into a churn, with which White went on his round. Nothing was then added to or taken from the milk, and it was given to White in exactly the same condition as it was received. Frederick White stated that he was present when the milk was transferred to the churn, and that nothing was done to it from the time it was received to the time he served the Inspector. In cross-examination, he said that the can was not locked when it travelled, and it could be opened by anybody who got access to it. Mr. Tew mentioned that the railway company did not allow the cans to be locked. Re-examined by Mr. Stimson, White said that there was the full quantity when the can was emptied. Mr. Marks submitted that the warranty had not been proved according to the Act, because it had been signed by the son of the seller, and it had not been shown that he was acting within the ordinary scope of his authority in doing so. He (Mr. Marks) did not, however, base his objection upon that point, but he urged that the defendants must not only prove that the warranty was a good one but that they sold the milk in the same condition that they purchased it. This they could not in this case prove, because the milk had been unprotected for between eleven and twelve hours. The defendants were an important trading company, and he had no desire to convict them if he were sure that another party was guilty, but how was that to be proved in the face of the evidence given? He did not in the least intend to imply that the company had tampered with the milk or had sold it knowing it to be in a certain condition, but how could he proceed against another party if there were no conviction in this case?—Mr. Stimson, for the defence, urged that it was impossible to prove every minute of the can's journey, and that they had no right to assume that the railway company left it unprotected all night whilst they were responsible for its safety. There was not the slightest suggestion that any milk had been taken away, and they had no right to assume that it had been tampered with. The defendants could not do more than accept the milk on its warranty. After retiring, the Chairman announced that the Bench had come to the conclusion that on the facts proved in Court the milk was not sold in the condition in which it was originally purchased and received with warranty from the original consignor. There must be a conviction, but the Bench would only inflict a nominal penalty of 1s. It was not for them to explain what happened, but they would say that they were of opinion that the defendants did not sell the milk knowing it was not in good condition. The costs amounted to 13s. 6d. The Bench granted permission to ask for a case if the defendants thought it necessary. The case against White was withdrawn.

At Lambeth, on December 15th, Mr. Denman had before him several summonses taken out by the Newington Vestry, under the Adulteration of Food and Drugs Acts.

George James Sanderson, of Sumner Road, Peckham, was summoned for selling milk not of the nature, substance, and quality of the article demanded by the purchaser. The defendant was hawking milk from a barrow at Walworth, when Mr. Rugg, an inspector in the service of the Vestry, purchased a sample for the purposes of analysis.

The milk was sold as separated milk. The certificate of the public analyst showed it to contain 32 per cent. of added water. The defendant, who pleaded that he sold the milk as he received it, was ordered to pay a penalty of 40s. and costs.

Edward Vears, of Walworth Road, was summoned for selling milk containing 7 per cent. of added water and deficient in cream to the extent of 20 per cent. Mr. W. H. Armstrong defended. In this case also the sample was taken from a milk barrow in the street belonging to the defendant, and in charge of one of his men. By the direction of Inspector Rugg, a boy named by them bought a pennyworth of milk from the milkman. Upon being told the purpose for which it was required, the man told Inspector Rugg, he was on the "pudding round," and the milk could not be expected to be so good. He asked the inspector to take a sample from another can. That was done, and the milk proved to be genuine, but the first sample was certified by the analyst to contain 7 per cent. of added water and to be deficient in cream to the extent of 20 per cent. In cross-examination by Mr. Armstrong, Mr. Rugg said the milkman did not say he was selling the milk as separated or skim milk. Mr. Armstrong submitted, on the authority of Lane and Collins, that there was no case to answer. Mr. Denman: If I recollect rightly the decision was that if a person asked for milk he could not complain if he got skim milk. Here the boy asked for milk and got milk and water. Mr. Armstrong contended that the present case was on all fours with Lane and Collins. Mr. Denman: In Lane and Collins they could not say it was not milk, because it was milk, although a certain amount of fat had been abstracted. They decided that they could not convict under Sec. 6, but they did not say they could not have convicted under Sec. 9. Mr. Armstrong: This is a summons under Sec. 6. Mr. Denman: But here there is extraneous water. That is the distinction I see in Lane and Collins; the certificate showed no added water. Mr. Armstrong called evidence to show that the milk was sent out from the defendant's premises in the condition in which it was received from the contractor, and suggested that it must have been tampered with by defendant's man, who, he said, had received notice to leave. Mr. Denman fined defendant 40s. and costs.

Walter Willis, of Surrey Grove, was fined 40s. and costs for selling milk containing added water.

At Liverpool, on December 15th, John Noble, milk dealer, 63, Freeland Street, appeared in answer to an adjourned summons charging him with selling milk that had been deprived of part of its cream. Three weeks since defendant produced a certificate by an independent analyst showing that the milk contained the required quantity of cream, namely, 3 per cent., and, to decide the matter, it was agreed to send a sample to Somerset House for analysis. The Government certificate produced yesterday stated that the milk contained 2.44 per cent. of fat, instead of at least 3 per cent., and expressed the opinion that it had been deprived of part of its cream. Defendant said it was a serious matter to be charged with fraud of which he was perfectly innocent. The milk sold was just as it came from the cow. Since the proceedings were taken he had had his cows put through a test, and found that four of them failed to give 3 per cent. of cream. They were fat cattle, and such beasts when they had been calved eight or nine months did not yield 3 per cent. of cream or anything like that quantity. On the other hand new-calved cows would give as much as 5 per cent. His only fault lay in not mixing the milk from the various animals. Mr. Kinghorn said it was very probable that the defendant was the victim of circumstances, but he (the magistrate) had no choice, and must fine him 10s. and 2s. costs.

At Nottingham, on December 18th, Charles Clarke, milk seller, of Daybrook, was summoned for selling adulterated milk at Arnold, on November 25th. Col. Story, Inspector of Weights and Measures under the County Council, proved the purchase of the milk by himself, and

handed in the analyst's certificate, which showed 95 parts of milk and 5 parts of added water. Defendant was fined 40s.

At Wednesbury, on December 7th, before Mr. Neville (stipendiary), John Lees, milk dealer, 68, Cook Street, Fallings Heath, was summoned by Mr. H. Van Tromp, Inspector under the Food and Drugs Act, for selling milk containing 21 per cent. of added water. Mr. S. M. Slater defended. William Grasson stated that on November 16th he encountered Mrs. Lees in Walsall Road, King's Hill, selling milk. He spoke to her, and she said it was not new milk. She was selling it at 2d. per quart. Witness purchased half a pint. Mr. Slater said his instructions were that defendant was going out of business, and had sold one of his two cows. To serve all his customers he had for a few days purchased milk from other persons to mix with the milk from his cow. No water was added by him or anybody belonging to him. The Stipendiary declared that the tale defendant had instructed his solicitor to put forward was absolute nonsense. A previous conviction being recorded against defendant for the same offence, he was now fined £10 and £1 8s. costs.

ARSENIC IN TOBACCO.

Dr. Andrew Wilson, in his science jottings, says: "Messrs. W. Woollams and Co. (whom I gratefully remember, and perpetually praise as the pioneers in the work of placing non-arsenical wallpapers on the market) have recorded that on testing the tobacco of some cigarettes which a friend of the firm asserted had made him ill, they found 'an appreciable quantity of arsenic in the tobacco.' The paper, it is added, contained no arsenic. Why arsenic should be added to tobacco at all is a somewhat puzzling question. I am not aware that the addition of arsenic improves the taste or quality of the tobacco, nor do I know of any deficiency, existing, say, in a poor-class tobacco, which arsenic is calculated to make good. There may be some trade secret or practice involved in the adding of arsenic, and if this is the case, I shall be glad to have sent me any exact information on this point which my readers may be able to afford. If the occurrence of arsenic be a purely accidental thing, it is well that it should be guarded against."

NUTRITIVE PROPERTIES OF OATS.

M. BALLAND is head of the chemical department of the alimentary section of the army; he tests all food supplies, so he is the ablest authority in France upon organic chemistry. He is occupied with, among other cereals, oats, and has laid before the Academy of Sciences an exhaustive monograph on that grain. His papers led to most interesting discussions by the ablest authorities of the day. He has just completed analyses of 1,000 samples of oats, grown in different regions and upon various soils. He desired to settle the question so disputed since a score of years: To what is the exciting, stimulating, or fiery principle in oats to be attributed? To an alkaloid, asserted many, lodged in the pellicle sheathing the kernel of the grain. M. Balland could find no such alkaloid; but he discovered a small quantity of essential oil that could explain the stimulating property. Oats, he affirms, form a complete food, contain never less than 3 and as much as 7 per cent. of fatty matters; the starch or saccharine substances varied from 61 to 64 per cent., and the nitrogenous from 7 to 14. One hundred grains of oats varied in weight from 1.80 to 4.32 grammes, and there are 30 grammes in an ounce. The kernel forms from 61 to 74 per cent. of the grain. The shell is very hard and difficult to masticate—hence the advantage of bruising for rations. It is an error to judge of oats by their colour. The white oats of many countries—those of Russia, for example—are most nutritive. In France the proportion of kernel is less in white than in black Tartary oats.

FOOD AND DRUGS ACT INSPECTION IN AMERICA.

PART II.

MR. CHARLES P. WORCESTER reports to Dr. S. W. Abbott, Secretary of State Board of Health, Massachusetts.

MILK.—From the beginning of the collection and examination of milk in 1883 under the Food and Drugs Acts to the present time there has been for the most part an annual increase in the number of samples reported. The past year shows a considerably larger number than ever before. For a number of years preceding the present the ratio of the samples of milk which were below the standard analysed in this laboratory has varied but little from 50 per cent. The record of the present year, however, shows what may appear as a surprising improvement of quality, the samples below the standard amounting to only 35.2 per cent. of the total number analysed.

But this improved ratio is due to the fact that the legal standard of total solids has been changed. For the months of July and August of the past year the legal standard of total solids was dropped from 13 to 12 per cent., so that a majority of the samples received during those months, which under the old standard would have been reported adulterated, are here reported of standard quality. Although the law now in force fixes the legal standard at 12 per cent. from April 1 to August 31, this law did not go into effect in time to include April, 1896, which is here reported under the 13 per cent. standard.

More artificially coloured milks were found than usual. Forty-five samples proved to be thus sophisticated. They were collected in fourteen towns and cities. Of these samples, thirty-nine were coloured with annatto and six with the aniline orange described in our report for 1895. Many of these coloured milks were found to be above the legal standard in total solids. In one instance, in which a conviction was secured in court, the milk contained over 17 per cent. of solids. In this case the aniline orange was used, and the defendant admitted his guilt, urging as an excuse that his customers demanded a more highly coloured article than natural milk.

Of the artificial colours, annatto seems to give a pale milk the most natural creamy appearance, and hence it is most extensively used. It is unfortunate for the milkman that when artificial colouring of any kind is used the yellow tint resulting is not confined chiefly to the cream, as is the case with the natural colour of milk. It thus happens that when pure milk has stood for a sufficient time to allow the cream to separate, it is found on pouring off the top that the milk underlying the cream has the familiar bluish tint of "skimmed milk." But when an artificially coloured milk is treated similarly, the yellow colour is found to tinge the milk below the fat layer. In the regular course of analysis this appearance often directs the attention of the analyst to the artificial colour, which is afterwards determined by the special tests.

No samples of milk were found to contain an added preservative. The use of formalin as a milk preservative, which is reported from some of the western States, has not been adopted here to any great extent.

A convenient means of detecting its presence in small quantities in milk is by the aid of fuchsin, decolourised by sulphurous acid. Ten or twelve cubic centimetres of the suspected milk are treated with about one cubic centimetre of the decolourised fuchsin solution. After standing a short time, hydrochloric acid is added and the mixture shaken. The presence of formalin is indicated by a violet colour, varying in depth according to the amount present. In the absence of formalin the milk shows only a yellowish colour after shaking with the acid.

Condensed Milk.—The analysis of a large proportion of the brands of condensed milk for sale in this State shows that for the most part a good quality of milk has been used by the manufacturers for this purpose. In a few instances, however, skimmed milk has evidently been used.

The so-called evaporated cream proves in most instances

to be an ordinary grade of milk, evaporated to the consistency of cream without the addition of sugar.

The determination of the fat has been made by a special method devised by Mr. A. E. Leach of this laboratory. It is well known to those who have tried to apply the Babcock method of fat determination to condensed milks which are preserved by the addition of cane sugar, that it is impossible to accomplish the clean separation of the fat, on account of the heavy char resulting from the action of the sulphuric acid on the sugar. No degree of dilution obviates this difficulty. To get rid of the sugar before applying the Babcock method, the following scheme was devised. Forty grammes of the sample are weighed out, and its aqueous solution is made up to 100 cubic centimetres in a graduated flask. Fifteen cubic centimetres of this solution corresponding to six grammes of the sample, are withdrawn by means of a pipette, and are transferred to one of the large test bottles commonly used for skimmed milk determinations in the Babcock centrifuge. The capacity of the body of this test bottle is about 50 cubic centimetres, and its neck is graduated to read as fine as 0.1 per cent. Water is then poured in till the liquid nearly reaches the neck of the bottle, and 3.5 cubic centimetres of an aqueous solution of sulphate of copper is added, of the strength of 69.28 cubic centimetres per litre (Fehling's copper solution). The bottle is then well shaken and its contents are allowed to settle. The precipitate, which consists of proteids, carrying with it the fat, subsides more quickly if the bottle is set in ice water. The clear supernatant liquid, which contains the sugar in solution, is then drawn off by means of a small-stemmed pipette, of a capacity of 50 cubic centimetres, whose upper end is fitted for convenience with a piece of rubber tubing. A small wisp of absorbent cotton is lightly twisted about the lower end of the pipette, to serve as a filter. After the liquid is thus drawn up into the pipette the cotton wad is removed from its lower end by lightly rubbing it against the inside of the bottle's neck as the pipette is withdrawn. The precipitate is washed three times as above by decantation, and then 25 cubic centimetres of sulphuric acid are added, and the usual Babcock centrifuge method is followed. The reading to tenths, multiplied by six, gives the percentage of fat in the sample.

BUTTER.—The inspectors have been unable to find any case of oleomargarine substitution during the year; 349 samples were examined.

LARD.—Of 67 samples, 18 proved to contain added cotton-seed oil or tallow.

CHEESE.—No case of adulterated cheese has been found; 57 samples have been examined.

OLIVE OIL.—Of 33 samples, 10 were seed oil, either wholly or in part.

HONEY.—Of 65 samples, 10 consisted wholly or in part of glucose syrup. The poorest sample contained 75 per cent. adulteration.

MOLASSES.—Of 137 samples, 12 contained glucose syrup. The maximum adulteration was 70 per cent.

SYRUP.—All three of the refiner's syrups examined contained added glucose syrup.

MAPLE SUGAR.—Of the 22 samples examined, 7 contained notable quantities of crude cane sugar.

MAPLE SYRUP.—Of the 28 samples, 10 contained glucose syrup, or were chiefly sugar-house drips.

GROUND SPICES.—*Allspice.*—Of 129 samples, 6 were adulterated. The adulterants were ground fruit stones, wheat, ginger, nut-shells, and peas. The worst specimen contained 40 per cent. of adulteration.

Cassia.—Of 250 samples, 7 were adulterated with ginger, wheat, sawdust, and a foreign bark. The maximum adulteration was 50 per cent.

Cayenne again leads in respect of adulteration, 23 of the 67 samples proving to contain corn, wheat, turmeric, ginger or gypsum. The maximum adulteration was 50 per cent.

Cloves.—Of 235 samples, 10 were found adulterated with wheat, rice, allspice, ginger or clove stems. The maximum adulteration was 60 per cent.

Ginger.—Of 222 samples, 38 were found adulterated with corn or turmeric. The maximum adulteration was 70 per cent.

Mace.—Of 13 samples, 1 contained corn and turmeric.

Mustard.—Of 214 samples, 73 were found to contain turmeric, wheat, corn, buckwheat, rice, cayenne, and potato. The maximum adulteration was 45 per cent.

Nutmeg.—Of the 12 samples examined, 1 contained wheat to the extent of 10 per cent.

Pepper.—Of the 337 samples examined, 22 were found to contain ground nutshells, wheat, bark, ginger, olive stems, or pepper hulls in large excess. The maximum adulteration was 65 per cent.

VINEGAR.—As usual, the percentage of adulteration in vinegar stands higher than any other food, of which as large a number of samples has been examined. Of the 83 specimens submitted, 41 were below standard.

TEA.—Of 96 samples examined, only 1 proved to be adulterated.

COFFEE.—Of 120 samples examined, 16 were adulterated with chicory, peas, wheat, dandelion, beans, sticks, or gravel. The maximum adulteration was 70 per cent.

COCOA (including Chocolate Preparations).—Of 39 specimens submitted, 9 of the samples of cocoa proved to be adulterated with rice, wheat, sugar, salt, oatmeal, arrow-root, or potato. The sample containing the largest admixture showed but 44 per cent. of cocoa.

CONFECTIONERY.—Of 126 samples examined, only 3 were found to contain elements not properly edible. These were samples of chocolate lozenges, containing no chocolate, but coloured with considerable addition of oxide of iron.

CREAM OF TARTAR.—Of 421 samples examined, 17 proved to be adulterated with corn, alum, gypsum, or acid phosphate of lime. The poorest sample contained 70 per cent of gypsum.

CANNED GOODS (exclusive of Condensed Milk).—Of canned goods, 47 samples were examined for metallic poison. Notable quantities of lead have not been found, and only 3 samples contained tin in injurious amount.

MISCELLANEOUS.—Of 190 samples classed under this head, 49 proved to be adulterated, or to contain injurious ingredients.

Among these samples were specimens of pickles, none of which were found to contain copper; of chowchow, which proved to contain salicylic acid, as also did samples of catsup and apple butter.

Samples of tripe and oysters were found to be preserved with boracic acid, and a sample of so-called "preservative" was found to consist of boracic acid.

Samples of extract of vanilla were found to be largely reinforced with coumarin.

Samples of "currant jelly" were found to consist of apple jelly coloured with cochineal.

Samples of tin foil used to wrap fresh cheeses and sausages were examined. The only sample which proved to contain more than 3 per cent. of lead, which is considered the danger limit in foil used for this purpose, was one in which was wrapped a cheese from Worcester County Creamery. This was a bright foil, in contrast to the dull foil used to wrap Neufchatel and cream cheeses. This specimen contained 52.8 per cent of lead.

Samples of sausages were found to be coloured artificially.

DRUGS.—Samples which do not conform with pharmacopœial requirements are here reported adulterated, or of poor quality.

Acetanilid: Of 21 samples examined, only 1 proved to be adulterated; it was found to contain corn.

Acidum Benzoicum: Of 6 samples examined, all were of good quality.

Acidum Hydrobromicum Dilutum: Of 7 samples examined, all were of good quality.

Acidum Tannicum: Of 5 samples examined, all were of good quality.

Æther: Of 22 samples examined, 4 were of poor quality, containing too much alcohol and water.

Alcohol: Of 14 samples examined, 4 contained too much water.

Aqua Ammonia: Of 7 samples examined, 3 were of poor quality, containing insufficient NH_3 .

Aqua Chlori: None of the 3 samples examined contained anywhere near the required amount of chlorine.

Aqua Destillata: Of 30 specimens, 25 were of poor quality. But very little care appears to be exercised by druggists to insure a good quality of this simple preparation. The subjoined figures will show the quality of the specimens examined. A pure distilled water of course contains no solid residue. The following figures indicate the parts of solid residue found in 100,000 parts of each sample:—

| | | | | | | |
|------|------|---|-----|-----|-----|---|
| 72 | 12 | 8 | 7 | 5 | 2.5 | 0 |
| 30 | 11.5 | 8 | 6.5 | 4.5 | 2 | 0 |
| 27 | 10 | 7 | 5.5 | 4.5 | 1 | 0 |
| 14.5 | 10 | 7 | 5.5 | 4.5 | 0 | 0 |
| 12 | 9 | 7 | 5.2 | | | |

Aqua Hydrogenii Dioxidi: The single specimen examined seemed to be of pharmacopœial strength.

Argenti Nitras: Of the 16 samples examined, all were of good quality.

Bismuthi Subcarbonas: Of the 7 samples examined, all proved of good quality.

Bismuthi Subnitras: Of the 27 samples examined, 3 failed to meet the pharmacopœial requirements, containing traces of arsenic or notable amounts of subcarbonate.

Calx Chlorata: Of the 5 samples examined, none were of good quality, the amount of available chlorine being in one case but 5 per cent of the requirement.

Calx Preparata: The 2 samples examined proved to be of good quality.

Cerii Oxalas: The 6 samples examined proved to be of good quality.

Chloral Hydras: The single sample examined proved to be of good quality.

Chloroformum: Of the 11 samples examined, 2 were of poor quality, containing too much alcohol.

Extractum Glycyrrhizæ: Of the 8 samples submitted, 7 proved to be adulterated with corn starch.

Extractum Nucis Vomicae: All of the 3 samples examined were of insufficient strength, the percentage of total alkaloids being respectively 11.28, 10.92, 9.10.

Glycerinum: Of the 8 samples examined, all were of good quality.

Hydrargyri Chloridum Mite: Of the 22 samples examined, all were of good quality.

Oleum Limonis: Of 10 samples examined, 4 were of poor quality, containing alcohol.

Paraldehydum: The single sample examined was of good quality.

Phenacetin: The two samples examined were of good quality.

Puleis Opil: Of the 31 samples examined, 16 were not of pharmacopœial strength. The following figures show the percentage of morphine contained in the various samples:

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 25.5 | 14.99 | 14.30 | 14.10 | 14.00 | 13.40 | 13.20 | 10.40 |
| 16.14 | 14.92 | 14.30 | 14.00 | 13.90 | 13.40 | 11.42 | 6.80 |
| 15.7 | 14.90 | 14.20 | 14.00 | 13.70 | 13.30 | 11.40 | 3.55 |
| 15.4 | 14.70 | 14.10 | 14.00 | 13.70 | 13.30 | 10.76 | |

Spiritus Aetheris Compositus: Of the 32 samples examined, only 7 proved of standard quality; 1 consisted chiefly of amyl alcohol, and the others contained little and in most cases no ætherial oil.

Spiritus Aetheris Nitrosi: Of the 13 samples examined, only 4 approximated the standard.

Spiritus Frumenti: Of the 13 specimens submitted, only 2 approached the standard requirements.

Spiritus Juniperi: The single sample examined proved to contain too much water.

Spiritus Vini Gallici: Of the 2 samples examined, was of poor quality.

Succus Limonis: Of the 2 samples examined, 1 was of poor quality, containing insufficient citric acid.

Syrupus: Of the 25 samples examined, 17 contained insufficient sugar.

Tinctura Iodi: Of the 43 samples submitted, only 1 contained the required amount of iodine. The percentage of pharmacopœial requirement of iodine which these samples respectively contained is shown by the following figures:

| | | | | | | | | |
|-----|-----|----|----|----|----|----|----|----|
| 100 | 100 | 92 | 87 | 85 | 80 | 75 | 70 | 50 |
| 100 | 95 | 90 | 87 | 85 | 78 | 74 | 68 | 50 |
| 100 | 94 | 90 | 87 | 83 | 77 | 72 | 68 | 25 |
| 100 | 93 | 90 | 86 | 82 | 75 | 70 | 68 | |
| 100 | 92 | 88 | 85 | 80 | 75 | 70 | 67 | |

Tinctura Opil: Of the 58 samples examined, only 1 contained the required percentage of morphine. The respective percentages of morphine of these samples is indicated by the following figures:

| | | | | | | | |
|------|------|------|------|------|------|------|------|
| 2.02 | 1.33 | 1.16 | 1.09 | 1.03 | 0.93 | 0.88 | 0.45 |
| 1.51 | 1.27 | 1.16 | 1.09 | 1.03 | 0.93 | 0.85 | 0.18 |
| 1.50 | 1.27 | 1.15 | 1.08 | 1.02 | 0.92 | 0.85 | |
| 1.49 | 1.25 | 1.15 | 1.06 | 1.00 | 0.92 | 0.84 | |
| 1.49 | 1.22 | 1.12 | 1.06 | 0.99 | 0.91 | 0.76 | |
| 1.48 | 1.22 | 1.12 | 1.04 | 0.99 | 0.91 | 0.72 | |
| 1.43 | 1.21 | 1.11 | 1.04 | 0.97 | 0.90 | 0.56 | |
| 1.37 | 1.17 | 1.09 | 1.03 | 0.96 | 0.89 | 0.51 | |

Very many of these samples did not bear the red poison label and printed antidote directions as required by statute.

Unguentum Hydrargyri: Of 8 samples examined, only 1 fulfilled the requirements of the Pharmacopœia. The poorest specimen contained about half the requisite amount of mercury.

Vinum Album: Of 5 specimens examined, all were below the pharmacopœial standard, containing much added sugar.

Vinum Rubrum: Of the 12 specimens examined, all were below the standard. One specimen contained as much as 22.5 per cent of solids, chiefly added sugar.

Miscellaneous: Of 15 samples under this head, 5 were of poor quality.

In this class were included samples of face lotions containing rose-water, oxide of zinc, subcarbonate of bismuth, calomel, a trace of lead, salt, bay rum, prepared chalk, tincture of benzoin, and a trace of corrosive sublimate.

Samples of sarsaparilla extract were examined, with the result of finding alcohol in the amount indicated in the accompanying table:

| COMMERCIAL NAME OF SARSAPARILLA EXTRACT. | Percentage of Alcohol (by Weight) |
|--|-----------------------------------|
| Ayer's Sarsaparilla | 21.00 |
| Thayer's Compound Sarsaparilla | 17.50 |
| Paine's Celery Compound | 17.00 |
| Hood's Sarsaparilla | 15.25 |
| Green's Nervura | 14.00 |
| Allen's Compound Sarsaparilla | 10.92 |
| Dana's Sarsaparilla | 10.92 |
| Brown's Sarsaparilla | 10.85 |
| Corbett's Shaker Sarsaparilla | 7.04 |
| Radway's Renovating Resolvent | 6.36 |
| Moxie | — |

* Mere trace.

The essential element of "Go to Sleep" was found to be sulphonal.

A face powder was found to consist of corn starch. A so-called "Whisky Salt" consisted of crude sodium carbonate.

A cleaning preparation called "Cuticlene" consisted essentially of corn meal, soap, and nitro-benzol.

The sample of carbon dioxide gas, supplied in cylinders for soda fountain use, was found to contain 1.2 per cent of air.

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BOVRIL is not merely a Meat Extract containing only the stimulative without the nutritive constituents of Beef. With the ever increasing rush of Life, commercially and socially, there arose a demand for a stimulant without deleterious after-effects; hence the introduction of ordinary Meat Extracts, Meat Essences, &c. But stimulant without nourishment simply stirs up the Fire of Life without providing for its continuance, thereby exhausting the system; the result being precisely the same as if poker were solely depended on to FEED the household fires.

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is specially prepared for use in the sick-room, and is put up in porcelain jars, obtainable from chemists and druggists only.

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Strength to sustain the patient through the crisis of the illness, and strength to carry the invalid to a speedy convalescence and recovery is all important, and Bovril (which is not merely an Extract of Meat but Meat ITSELF) furnishes the system with renewed strength and increased vitality, being relished and retained when ordinary foods are rejected.

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